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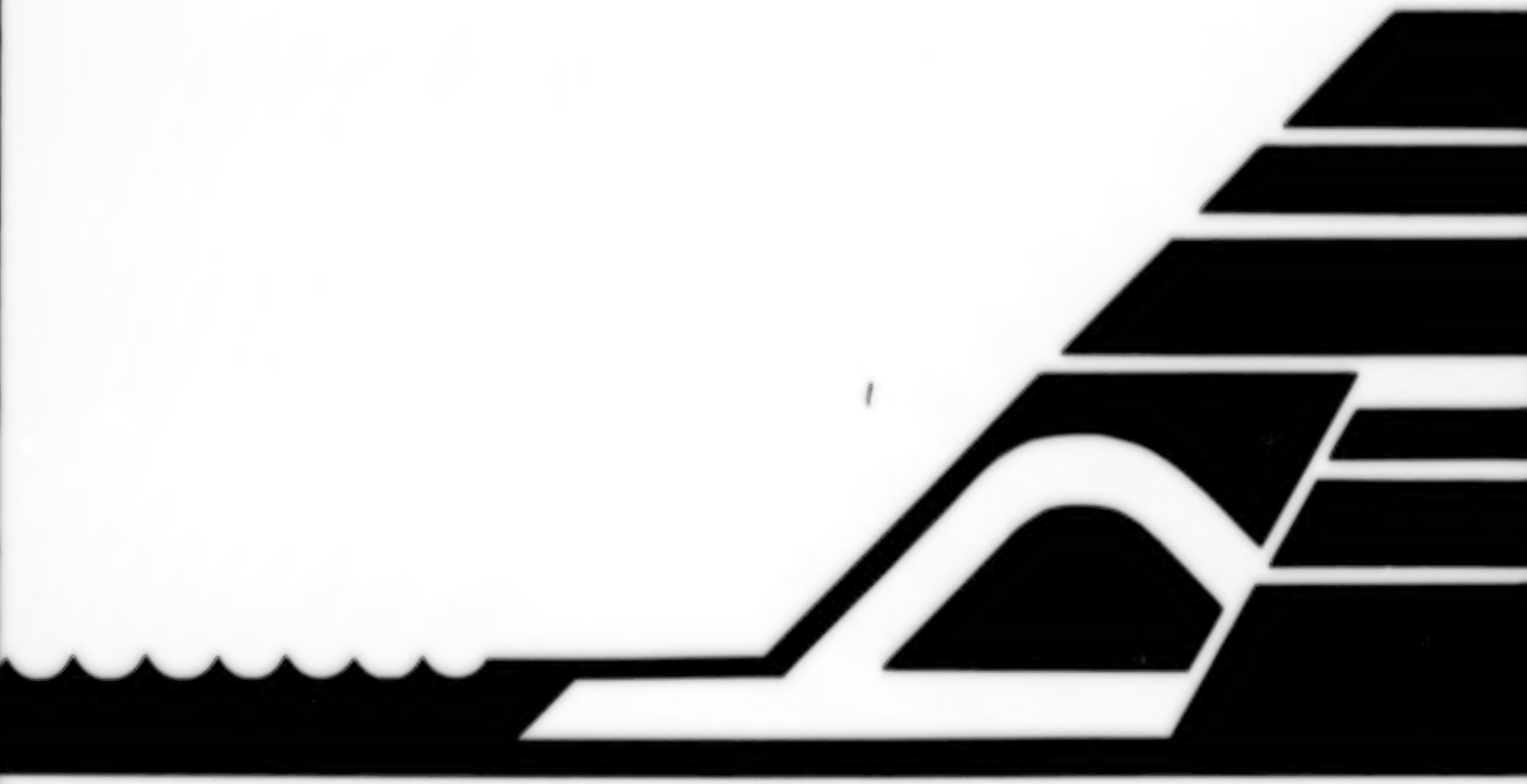
RESOURCE/BOUNDARY EVALUATION FOR LANDS ADJACENT TO

COLORADO NATIONAL MONUMENT
COLORADO



DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE

RESOURCE/ BOUNDARY EVALUATION FOR LANDS ADJACENT TO COLORADO NATIONAL MONUMENT COLORADO

SEPTEMBER 1989

UNITED STATES DEPARTMENT OF THE INTERIOR/ NATIONAL PARK SERVICE

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SUMMARY

Congress directed the National Park Service (NPS) to conduct a study, during the 1989 fiscal year, of certain public lands adjacent to Colorado National Monument. The principal focus of the study has been the Black Ridge Canyons Wilderness Study Area (WSA) and environs immediately west of the monument, all or part of which various interests have long proposed be included in an expanded national monument or park.

The NPS planning process for conducting the study consisted of two phases, each of which has afforded ample opportunity for public involvement.

RESOURCE SIGNIFICANCE

The first phase assessed the study area's natural, cultural and recreational resources and their potential to facilitate improved management and greater public enjoyment of the existing monument. On the basis of the assessment, it was determined that the study area possesses resource values of national significance that are not only fully compatible with the purposes, themes and visitor uses of the existing monument, but that are also deserving of the highest possible standards of long term protection. If the lands represented by Alternative 1, and even more so Alternative 2, were added to the monument, there would be strong justification for initiating action to change the status of the monument to that of national park.

The Analysis of Significance in the following pages offers a more detailed discussion of that determination.

ALTERNATIVES

In the second phase of the study, the NPS identified, evaluated and compared a variety of possible boundary and management alternatives relating to the future administration of the study area. Two of the four alternatives contemplate the inclusion of lands and waters within the study area in an expanded national monument or park under NPS management, and the other two relate to continued management of the public lands in the study area by the Bureau of Land Management (BLM).

Alternative 1 would expand the monument to include an additional 77,230 acres of land, more or less, that is generally bounded on the east by the existing monument, on the north by the south bank of the Colorado River, on the west by the Utah State Line and on the south by the north rims of the Little Dolores and Sieber Canyons and the north scarp of Black Ridge. Under Alternative 1, the expanded monument would total about 97,700 acres.

Alternative 2 would expand the monument to include all of the lands identified in Alternative 1, plus a 21-mile section of the Colorado River and about 5,370 acres of land

along its north bank from the Loma boat-launch area downstream to the State line. Under Alternative 2, the expanded monument would total about 104,070 acres.

Alternative 3 envisions continued BLM management of the study under its Interim Management Plan or, if Congress so designates, as Wilderness or as Recreation Land. Because BLM's actual management under these various options would not materially differ, they are considered to be distinctive in name only and thus are treated here as a single alternative. Under Alternative 3, monument status and acreage would not be affected.

Alternative 4 envisions a formal designation of an area, somewhat larger that the original study area, that is to remain under BLM management as either a National Conservation Area (NCA) or a National Recreation Area (NRA). As a practical matter, the differences between the NCA and NRA designations are largely nominal. Either one could also incorporate elements of any of the options identified under Alternative 3, using simple zoning to further assert a particular management preference for either consumptive or recreational use. Under Alternative 4, monument status and acreage would not be affected.

The *Alternative for Management, Management Comparison Matrix* and related maps in the following pages offer a more detailed discussion of the various alternatives and options considered in the study.

PUBLIC INVOLVEMENT

During January 1989, the NPS completed a review of the draft task directive for conducting the resource and boundary evaluation mandated by Congress. The BLM assisted the NPS in formulating and reviewing the task directive, which was approved in February 1989.

During the week of January 23, 1989, public meetings were conducted in Fruita, Montrose, Grand Junction, Delta, and Glade Park, Colorado. In preparation for these meetings, over 1,400 brochures were distributed to potential interested individuals, special interest groups and various Federal, State and local Agencies. News releases were also distributed to over 200 public media outlets.

Approximately 300 people attended the meetings in which both the Black Canyon of the Gunnison National Monument (BLCA) and Colorado National Monument (Colorado NM) studies were presented. In July 1989, the NPS published a newsletter informing the public of the status of the studies.

Following public review of this draft document to be published in the Fall of 1989, a summary of public comments will be presented as a part of this section in the final document.

FUTURE ACTIONS AND CONSIDERATIONS

Following an analysis of public input, the document, which will not identify a preferred alternative, will be subject to higher-level Agency and Departmental review and approval. The final report will then be submitted to Congress for its use in determining the need for future action.

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INTRODUCTION

PURPOSE OF STUDY

The NPS, in accordance with the House Conference Report (100-862, page 14) accompanying the Interior Appropriations Bill (PL 100-446, 102 Stat. 1174) approved on September 27, 1988, was directed to conduct a study of lands adjacent to Colorado National Monument. Refer to Figure 1 for the location of the general area studied. The primary purpose of the study was to (1) assess the subject area to determine if it included significant natural, cultural, and recreational resources related to the purpose of the monument, (2) determine if the study area or portion thereof would fill a management or administrative need for resource protection and public use in relation to the existing monument, and (3) evaluate existing and other alternatives for managing the resources determined to be significant, (4) determine if Colorado NM would qualify for national park status should any or all of the study area be added to the existing monument.

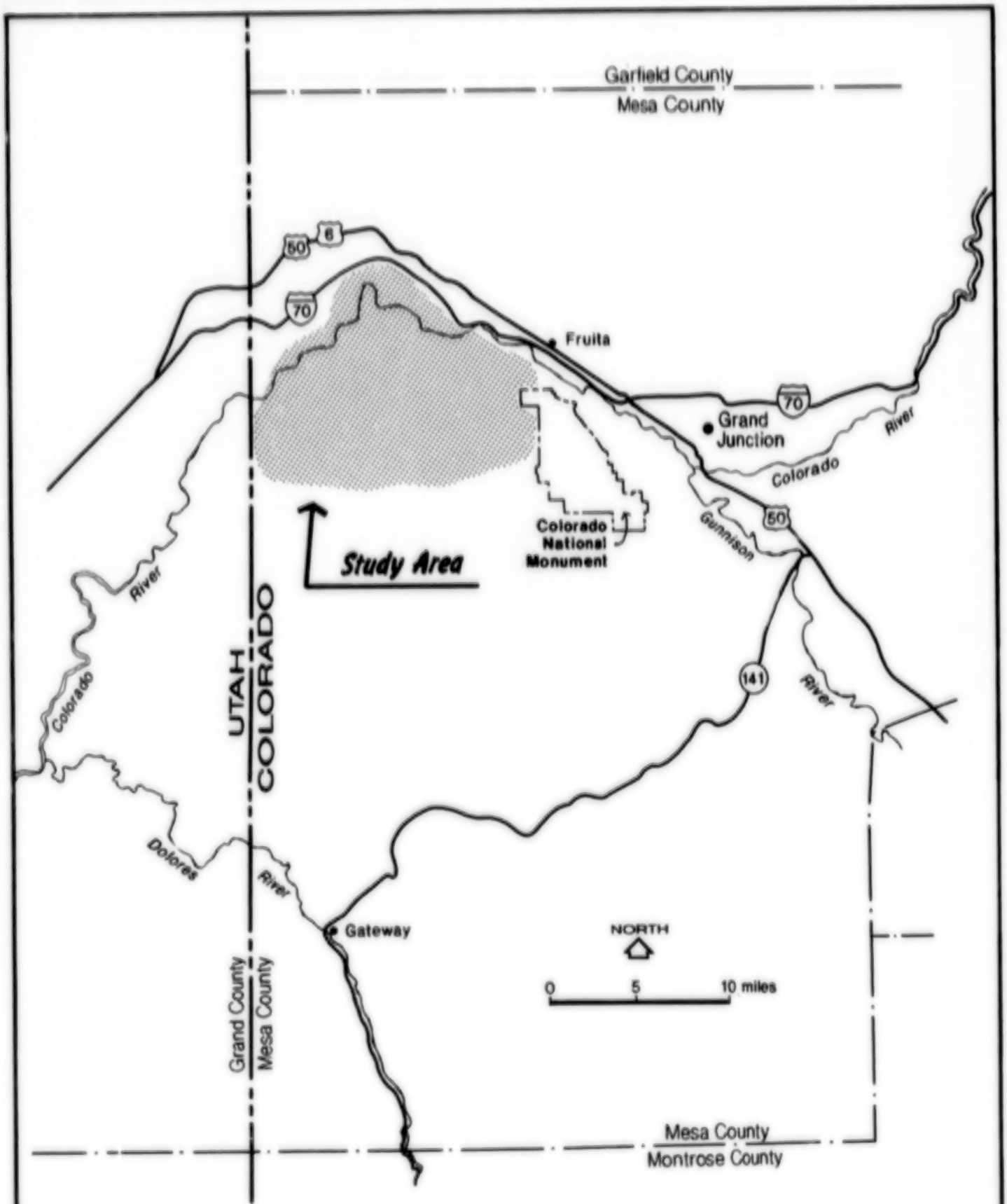
STUDY AREA AND ZONE OF INFLUENCE

As referenced in Figure 1, the area evaluated is located in west-central Colorado near the city of Grand Junction. It lies entirely within Mesa County and is a part of the Third Congressional District.

The area primarily includes those lands referred to as the Black Ridge Canyons WSA situated between the Colorado/Utah State line and the west boundary of Colorado National Monument. On the north, the area withdrawn by BLM for protection of scenic river values of the Colorado River and a corridor approximately 1/2-mile wide either side of the river, are included. The Black Ridge, Sieber Canyon and Little Dolores River Canyon are the southern boundary of the area.

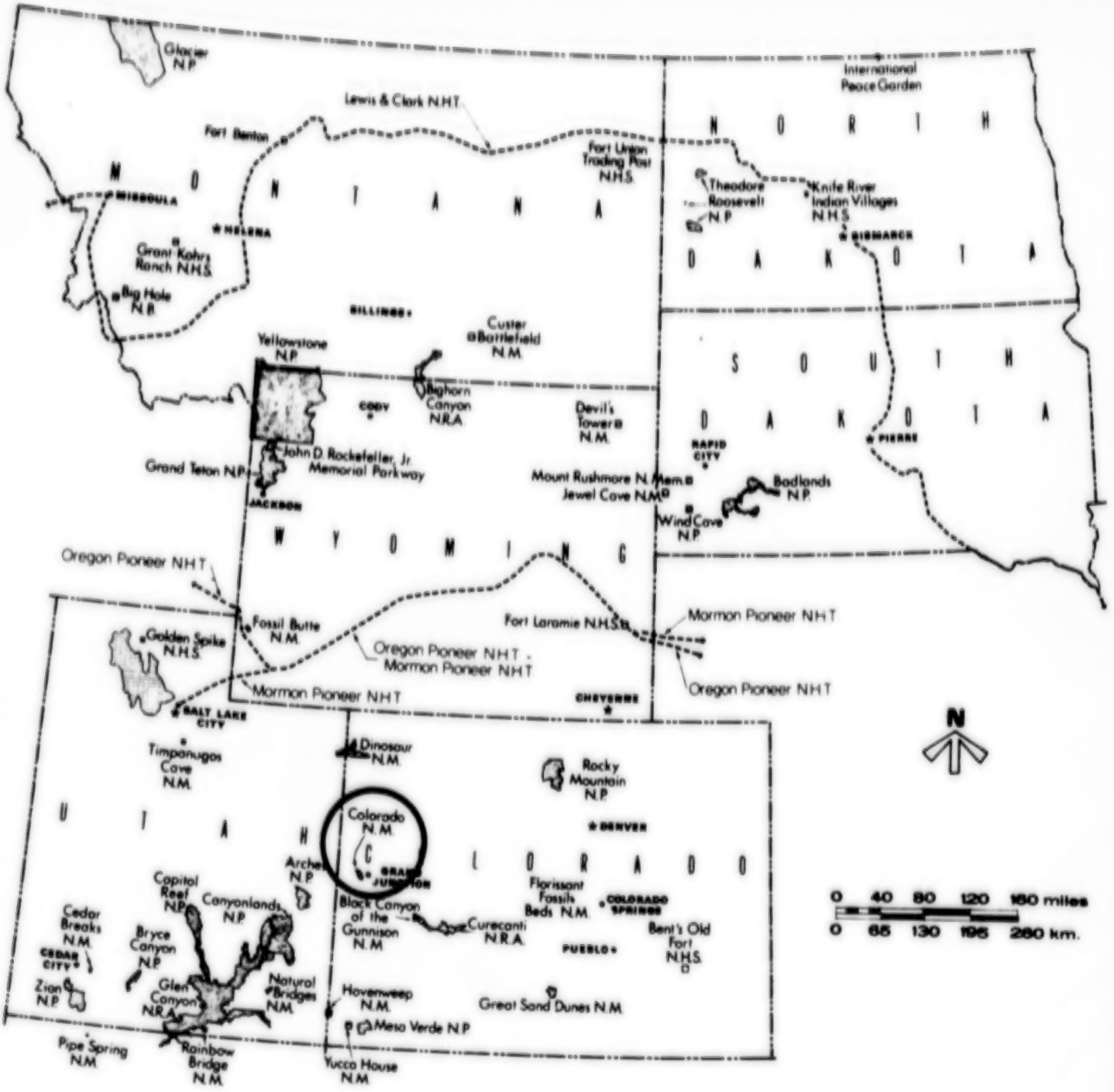
Several population centers are important in relation to the area studied. Grand Junction and the neighboring communities in the Grand Valley area have an estimated population in excess of 80,000. Within a day's drive (350 mile radius) are three major metropolitan areas: the Colorado Front Range including Fort Collins, Denver, Colorado Springs, and Pueblo; the Wasatch Front in Utah including Salt Lake City, Provo and Ogden; and the Santa Fe/Albuquerque area of New Mexico. The total population of these areas exceeds four million. Refer to Figure 2.

Access to the Grand Valley is excellent. The area is served by several airlines, Amtrak, and bus lines. The primary highways are Interstate 70 and U.S. 50. For more information concerning the socioeconomics, refer to Appendix A, *Socioeconomic and Visitor Use Assessment.*



Vicinity Map

FIGURE I



Legend

- Locations of Major Cities
- Locations of State Capitals
- State Boundary Lines
- National Park Service Areas
- National Park Service Historical Trails

ROCKY MOUNTAIN REGION

National Park Service

United States Department of the Interior

FIGURE 2

RECREATION OVERVIEW

National Park Service areas within approximately 100 miles include: Colorado NM, Arches NP, Black Canyon of the Gunnison NM, Canyonlands NP, Curecanti NRA, and Dinosaur NM. In addition there are portions of six National Forests (Grand Mesa, Gunnison, Manti-La Sal, San Juan, Uncompahgre, and White River), several million acres of Federal land administered by the Bureau of Land Management, several recreation areas managed by the States of Colorado and Utah, and numerous private or non-profit museums and other attractions.

Some of the more popular recreational activities in the region include: sightseeing, camping, hiking, boating, fishing, hunting, bicycling, and 4-wheeling. Opportunities to engage in these activities are abundant in western Colorado and eastern Utah.

Within the area evaluated, that portion identified by BLM as a WSA is managed in accordance with an Interim Management Plan (IMP), pending a final determination of its wilderness potential.

Recreational activities are permitted in the WSA as prescribed in the IMP. The use of mountain bikes and motor vehicles is permitted only on the existing access road to the Rattlesnake Canyon Trailhead.

For more detailed information concerning recreation use and visitation trends, refer to Appendix A, Socioeconomic and Visitor Use Assessment.

LAND OWNERSHIP AND USE

The vast majority of land within the area evaluated is in Federal ownership and is managed by the BLM. The remaining land is privately owned. According to information furnished by BLM, which relates to their existing management, several parcels of private land have been identified for acquisition. Acquisition criteria specified in the Grand Junction Resource Management Plan (RMP) were used to identify specific parcels partially surrounded by the WSA and others along the Colorado River within the area considered eligible for "scenic" designation under the Wild and Scenic Rivers System. BLM has been actively pursuing acquisition of ten of these parcels. Acquisition of the other parcels is planned through exchange or purchase from willing owners as opportunities develop.

Use of the Federal lands within the WSA portion of the area evaluated must be consistent with BLM's Interim Management Policy for management of the WSA. Under this policy, uses of the area must not degrade the wilderness values. Activities such as off-road-vehicle and mountain bike use, cutting of firewood or Christmas trees, oil/gas and coal leasing, and mineral material disposal, are prohibited. Uses such as sightseeing, hiking, camping, grazing, and hunting are permitted. The area is also open to mineral location (gold, silver, platinum and copper) and development of any valid Post-FLPMA leases subject to non-degradation of wilderness values.

Private lands in the area evaluated are, for the most part, not developed. There are some exceptions such as gravel roads, a few small dams, private residences, and powerlines.

Adjacent federally owned and managed lands on the north, west and south are managed by the BLM with a mandate for multiple use. To the east, Colorado NM is managed by the NPS.

Along the Colorado River, south of the Loma boat launch and adjacent to the area evaluated, are several parcels of BLM and Bureau of Reclamation land. Through a special agreement, the Colorado Division of Wildlife is managing these parcels as a wildlife area. These lands were set aside and are currently being managed in an effort to mitigate impacts generated elsewhere on wetlands wildlife.

LAND USE PLANNING

Within the area evaluated, all Federal lands have been and are being managed by the BLM. Under its mandate for multiple use, the lands have traditionally been available for virtually all uses including: mining; oil/gas leases; grazing; cutting of firewood, fence posts, and Christmas trees; hunting; hiking; and off-road-vehicle use.

In March 1985, BLM released the draft *Grand Junction Resource Area Resource Management Plan and Environmental Impact Statement*. In January 1987, the *Grand Junction Resource Area Resource Management Plan and Record of Decision* was released. That document recommended wilderness designation for most of the land within the area evaluated.

In 1979, the Colorado River in this area was studied to determine suitability under the Wild and Scenic Rivers Act. The segment of river from Loma to the Colorado/Utah line was recommended for designation as "scenic" in the September 1979, *Wild and Scenic River Study Final Environmental Statement*. Lands within the National Scenic River Corridor, 1/4-mile on each side of the river, were withdrawn from mineral location. The BLM/Department of the Interior recently extended that withdrawal to continue protection of the corridor pending a congressional decision.

The BLM is continuing to investigate the possibility of a "National" designation for the study area as part of a much larger area (100,000 acres). The national designations being considered are National Conservation Area or National Recreation Area. The specific designation of NCA or NRA would require additional planning and extensive public involvement, followed by a recommendation from BLM and ultimately formal designation through congressional legislation.

Another ongoing, major land use planning effort within the region that must be recognized is that of the Grand Junction/Mesa County Riverfront Commission. The riverfront commission was formed in 1987 through a mandate by the Grand Junction City Council and Mesa County Commissioners to spearhead planning and development efforts that would encourage and provide for public access along the Colorado and Gunnison Rivers.

This would be accomplished by providing extended trail systems, parks and greenbelts, and river launch/landing sites.

Planning and development efforts are well underway for that portion of the Colorado riverfront between Palisade and Fruita, Colorado, which includes Grand Junction. In the long term, this project will most likely significantly increase visitation to the monument and throughout the river corridor within the area evaluated in this study.

STUDY AREA RESOURCES

NATURAL RESOURCES

Geology

The area evaluated is located within the eastern margins of the Colorado Plateau, a physiographic province of some 150,000 square miles that is generally typified by gently dipping sedimentary rocks, high relief produced by deeply incised drainages, elevations above 5,000 feet and a semi-arid climate. Because soils are thin and vegetation is sparse in this dry region, infrequent episodes of brief but intense rainfall often yield massive surface water runoff. These, in concert with the more insidious chemical and mechanical effects of migrating groundwater, have eroded the nearly horizontal rock units of alternating hardness exposed in the province to create its characteristic stair-step topography.

Though the resulting erosional escarpments and benches are dominant landforms throughout the Colorado Plateau, other features often reflect the distinct influence of a local tectonic disturbance. Among these rather anomalous structures is the Uncompahgre Uplift, a long, linear bulge in the earth's crust upon whose northern tip the study area is also situated.

The Uncompahgre Uplift first asserted itself in late Paleozoic times, when the area was thrust upward to form a lofty range of mountains more than 100 miles long. Because elevated areas are more vulnerable to erosion, the ancient highland was vigorously attacked by the elements and soon reduced to a low plain, exposing, in the process, the heart of its crystalline Proterozoic core. By the late Triassic, about 200 million years ago, the exposed gneisses and schists were already being covered by stream deposits from a source to the east, and during the rest of the Mesozoic Era, and even later, the area received a thick blanket of terrestrial and marine sediments.

The Uncompahgre core and its burden of overlying sediments was elevated once again during the late Cenozoic Era, launching yet another cycle of rapid erosion that has continued up to the present time. An accumulation of deposits thousands of feet thick has thus far been removed, at last revealing the colorful sequence of Mesozoic sandstones and shales and the dark, somber Proterozoic rocks that are exposed in the study area today.

On the northern end of the Uncompahgre, the margins of the latest uplift are marked by a series of high-angle faults and pronounced monoclinal folds that attest to thousands of feet of vertical displacement. It is these features and their influence upon local patterns of erosion that distinguish the area evaluated from the rest of the Colorado Plateau.

Here, the headword erosion of numerous tributaries of the Colorado River has incised the elevated nose of the uplift with a network of deep, intricate and colorful canyons whose

labyrinthine depths are punctuated by towering sandstone spires, huge amphitheaters and soaring natural arches that differ morphologically from those at Arches National Park. And in the area evaluated, unlike that small part of the Uncompahgre Uplift already occupied by Colorado National Monument, the restless main stem of the Colorado River itself has cut into the nose of the uplift to expose even more dramatically the stratigraphic and structural features that give the area its unique flavor.

Paleontological Resources

The Morrison Formation, which is perhaps best known for the dinosaur remains it has yielded, is exposed in numerous locations throughout the study area and surrounding region. It has been vigorously studied and exploited here since about 1900, when paleontologist Elmer Riggs began investigations not far from the existing monument that led to the initial discovery and typing of both *Brachiosaurus* and *Apatosaurus*. Other sites in the vicinity have recently yielded noteworthy specimens of *Stegosaurus* and lesser reptiles, and the area is also becoming known for its fossil remains of primitive mammals. Within the study area itself, virtually intact fossils of *Platanus* (Sycamore) flowers have been collected. At about 115 millions years of age, these are believed to be the oldest fossils of flower parts known to exist anywhere in the world.

Soils

Soils derived from rocks exposed in the area evaluated are generally thin, sandy and relatively permeable, but those that have weathered out of the Morrison Formation are noticeably expansive and carry a high selenium content. Because most do not retain moisture well, and because they are both somewhat alkaline and lacking in organic content, they support only sparse vegetation except where watered by springs and seeps or in gallery situations along stream courses where runoff collects and lingers. When not anchored by grasses or cryptogamic crusts, most local soils are vulnerable to wind erosion.

Vegetation

The distribution of plants in the area evaluated varies with soil type, the availability of moisture, slope and aspect, elevation, and fire and grazing history. Crowning the upland mesas and benches in most places is a pygmy forest of pinyon pine and Utah juniper, with pine dominating above 6,000 feet and juniper dominating below. The relatively sparse understory in the pinyon/juniper forest consists of native and introduced grasses, a variety of forbs, and scattered shrubs and xerophytes. Where recently opened by fire, the pinyon/juniper forest is most often replaced by sagebrush, which in time is invaded by pine and juniper seedlings and re-forested. South-facing exposures in the canyons tend to be sheer, but north-facing slopes may support a mosaic of mountain mahogany, single-leaf ash, serviceberry, and fendlerbush, punctuated by scattered specimens of pine and juniper. At higher elevations, dense thickets of gamble oak may crowd out most competing shrubs. Cottonwoods, willows, exotic tamarisk, and a variety of grasses and sedges populate the central washes and other areas where free moisture is present, while

sagebrush and short grasses are more common on the adjacent terraces. The presence of sage, tamarisk and cheatgrass in such areas is often indicative of a protracted grazing history.

Wildlife

The varied habitats within the study area are home to numerous species of animals. Though only limited numbers of mule deer are found there during the warmer months, a sizeable population uses the uplands and western canyons as winter range. So, too, does a small but growing band of elk that has begun to frequent the area in recent years. About one hundred head of desert bighorn sheep, the descendants of several bunches introduced as a cooperative venture in the late 1970s and early 1980s, also roam through the canyons and benchlands in the northeastern quadrant of the area evaluated. Other large animals that frequent the area include mountain lions and the occasional black bear. A host of lesser mammals -- mice, moles, ground squirrels and woodrats -- occupy every conceivable niche. These, in turn, support varying numbers of coyotes, bobcats, badgers, weasels and other creatures that prey upon them. Golden eagles, great horned owls and endangered peregrine falcons and bald eagles frequent the area each year, and scores of other bird species either make their homes there or pass through on migration. A variety of snakes and amphibians range from river level to the uplands, and the area is a meeting ground for numerous species of lizards that may interact nowhere else on earth. And finally, at least one species of butterfly has been recorded that is unique to the area. Other endangered species include the Colorado squaw fish and humpback chub. Another endangered species of fish, the bonytail chub, was captured in Ruby Canyon near Black Rocks in 1984.

Air Quality

Areas that consistently violate minimum Federal standards because of man-caused activities are classified as nonattainment areas and plans must be implemented to reduce ambient levels below the maximum pollution standards.

To protect areas not classified as nonattainment areas, Congress has established a system for the prevention of significant deterioration (PSD) through the Clean Air Act Amendment of 1977. Under this act, areas are classified (Class I, II, or III) by the additional amounts of total suspended particulates (TSP) and sulfur dioxide degradation that would be allowed. Colorado has established a similar program limiting additional amounts of sulfur dioxide. Colorado's lands are classified Category I, Category II, and Category III (corresponding to greater permissible levels of sulfur dioxide).

Most of the region around the area evaluated has been designated a PSD Class II attainment area. An area including Grand Junction and the Grand Valley northwest to Fruita is the Mesa County designated nonattainment area for TSP. Colorado NM is designated a State Category I area and has been recommended for PSD Class I redesignation.

The WSA is managed as a PSD Class II area in accordance with BLM's Wilderness Management Policy (Federal Register Vol. 47, No. 23, February 3, 1982). Designating the WSA as wilderness or an a national park would not change the air quality designation from Class II. Only the State of Colorado has the authority to reclassify such areas.

Future development of major emitting facilities within the Mesa County nonattainment area will continue to be severely restricted until TSP values are reduced.

CULTURAL RESOURCES

Data concerning the archeological and historic resources of the area evaluated were acquired from the Bureau of Land Management, Grand Junction Resource Area; the Office of the State Archeologist, Colorado State Historical Society; various manuscript reports and publications documenting archeological work on the Uncompahgre Plateau and vicinity; the *West Central Colorado Prehistoric Context*; and the Cultural Sites Inventory archeological data base for Colorado National Monument. The general archeological understanding for the west central part of the State, including the study area, is very broad and basic because of the limited amount of in-depth work that has been conducted. Only three archeological surveys of any magnitude (Grand River Institute 1987; Historical Museum and Institute of Western Colorado 1976; Stroh and Ewing 1964) have been conducted and no sites have received testing or evaluation for the National Register of Historic Places. Nonetheless, it is possible to discuss the contexts of area history in general stages, based on the recent summary prepared for the Colorado State Historical Society, *West Central Colorado, Prehistoric Context* (Reed 1984). These stages are reflected in the approximately 250 archeological and historic sites that have been documented in the general region.

Paleo-Indian Stage

Peoples of the Paleo-Indian period, dating approximately 12,000 to 7,500 years ago (10000-5500 B.C.), were the first to inhabit the region. This stage represents an efficient and enduring adaptation to terminal Pleistocene environments, characterized by small groups exploiting regional resources in a migratory lifestyle. Utilization of Pleistocene megafauna, such as mammoth and giant bison, was an important part of seasonal activities, although undoubtedly acquisition of plant resources was an important part of life as well. Paleo-Indian material culture reflects the mobile, big-game hunting lifestyle with tool kits generally suited for animal killing and processing. Habitation structures are extremely rare, with none being reported from west central Colorado. Regional evidence of this big-game hunting tradition occurs as isolated projectile points or as isolated artifacts in later-dating archeological sites. Distinctive Clovis and Folsom Paleo-Indian projectile points have been found near the general area evaluated (Buckles 1971; Carpenter 1976; Gleichman et al. 1982), and Plano associated projectile points were found on the surface and collected by Stroh and Ewing (1963) during their survey of Colorado National Monument.

Archaic Stage

As terminal Pleistocene environmental conditions were replaced by those more similar to today's environment, the big-game hunting tradition evolved into a lifeway that focused on plant collection and processing and on hunting a great variety of small fauna. This lifeway endured in west central Colorado from approximately 5500 B.C. to A.D. 500 where the resources appear to have been sufficient to support a relatively large population compared to both the Paleo-Indian and the subsequent Formative stages. A number of attempts (Reed 1984:24) have been made to subdivide the Archaic stage into a developmental sequence based on small changes in artifact styles and artifact frequencies. The most relevant is Buckles' (1971) study on the Uncompahgre Plateau. However, because of the extremely limited information from the area evaluated itself, it is most appropriate to say that the proposed expansion area is characterized by what has traditionally been called the Desert Archaic (Jennings and Norbeck 1955). This was one of the earliest designations to result from awareness that there is extreme areal variation within the Archaic, and it very appropriately describes the remains that have been documented.

Sixteen diagnostic Archaic sites have been identified within the area evaluated although the vast majority of the remaining sites are probably Archaic in age. Surface examination alone frequently fails to produce the rare diagnostic projectile styles or other materials that enable assignation of cultural affiliation. Archaic site types within the study area include both open and sheltered campsites (rockshelters), open and sheltered lithic scatters, and rock art. Evidence of habitation structures has not been found. A variety of stone, bone, antler, and plant remains have been recovered from Archaic sites in west central Colorado, although no ceramics are associated with this stage. The bow and arrow, traditionally believed to be a Formative period development, may have appeared during the very late Archaic in this region (Reed and Nickens 1980).

Formative Stage

The Formative stage in west central Colorado is marked by the appearance of agriculture (probably horticulture in the area evaluated) and the resultant establishment of a sedentary or semi-sedentary lifeway. About the time of Christ, there was an important shift in the economy of the prehistoric inhabitants of the region that has been documented by scattered evidence of cultigens, masonry structures, and ceramics. Well-known traditions, such as the Anasazi in southwestern Colorado and the Fremont of Utah and northwestern Colorado, flourished in areas where there was the appropriate combination of reliable water and arable land. This became the focal point of an agriculture dependent sedentary life. However, the manifestations of this lifestyle in the area evaluated are inadequate to assign cultural affiliation, so are simply most appropriately called Formative. There is both Fremont-style and Anasazi-style rock art in the area along with masonry remains that resemble no structure styles associated with either group. Ceramic styles of both Fremont and Anasazi tradition occur, but are generally considered trade wares because of their non-local manufacture. Consequently, the degree to which prehistoric peoples of west central Colorado conformed to a Formative lifeway is not well understood, although the stage is believed to date between A.D. 500 and 1200. Corn and

possibly squash were utilized, but the small quantities found suggest that hunting and gathering remained the basic subsistence activity. Masonry surface structures and rockshelters were inhabited, and small villages suggesting a band level of organization have been recorded (Crane 1978). It may have been that the transition to Formative life was not as complete in west central Colorado as in other areas and that dependence on hunting and gathering plant materials continued to play a major role on the Uncompahgre and the adjacent region. This certainly is indicated by the nineteen identified Formative sites within the proposed expansion study area. These closely resemble the Archaic stage sites with only the addition of small, isolated masonry structures and ceramics. The sites generally occur in the canyons and at the mouths of the major drainages that drain the northern edge of the Uncompahgre Plateau--locations where both reliable water and arable land occur--and possibly were areas of seasonal horticultural activities. None of the substantial Formative period sites in west central Colorado are found near the area evaluated.

Proto-Historic/Historic Stage

Following the disappearance of the Formative stage for reasons that remain unclear, a highly mobile, Archaic-style lifeway reappeared in west central Colorado with hunting and gathering again forming the subsistence base. This time period between A.D. 1200 and the appearance of what can definitely be called the Ute tradition is documented by only one site in west central Colorado (Reed 1984), which is located in the Ridgeway Reservoir project far south of the area evaluated.

The Ute are believed to have entered this region sometime between A.D. 1200 and 1400, based on linguistic and archeological evidence. However, the earliest firm evidence for Ute occupation of the area dates to the 1600s, based on a dendrochronological specimen from a brush structure near Durango (Dean 1969). The first Euro-American observation of the Utes was during the 1776 Dominguez-Escalante Expedition (Bolton 1972). The Ute lifeway was similar to the earlier-dating Desert Archaic with small bands hunting and gathering seasonally throughout a defined territory. Artifactual materials resemble the Archaic, and temporary brush structures and wickiups were used for shelter. The major material difference between the Desert Archaic and Ute was the latter's reliance on the bow and arrow and Ute use, if not manufacture, of pottery. Few Ute sites have been recorded in the region although wickiups and platform trees are known to exist within Colorado National Monument and the canyons of the Black Ridge area. By 1881 the Ute were expelled from west central Colorado.

Euro-American Stage

The 1776 Dominguez-Escalante expedition heralded Euro-American movement into the area, although utilization became intense only after the 1850s gold rush. The area evaluated contains 11 documented occurrences of dugouts, log cabin remains, corrals, inscriptions, sheds, trash scatters, line camps, and other archeological remains of short-term Historic period occupation.

Status of Cultural Resource Base

It is unfortunate that little information exists about the prehistoric and historic resources of the subject area and the region in general. Because no sites have received detailed study or evaluation, there is insufficient information on which to base an evaluation of their significance. However, the area does have the potential to yield significant information and it should not be discounted as an important information base for future generations.

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ANALYSIS OF SIGNIFICANCE

EVALUATION CRITERIA

The boundary study criteria contained in the National Park Service *Management Policies* states that "The National Park Service will conduct studies of potential boundary adjustments and may recommend boundary revisions to include significant resources or opportunities for public enjoyment related to the purpose of the park."

The "purpose" of Colorado NM is stated in Presidential Proclamation No. 1126 dated May 24, 1911, which established the area. This document states, "The extraordinary examples of erosion are of great scientific interest, and it appears that the public interest would be promoted by reserving these natural formations as a national monument, together with as much public land as may be necessary for the proper protection thereof." Therefore, the monument's purpose is preservation of "extraordinary examples of erosion" for "scientific" and "public interest."

Subsequent Proclamations and legislation relating to boundary expansions during the Hoover (1933) and Eisenhower (1952) years and later have tended to broaden the area's purpose to also include the protection and public enjoyment of all aspects of the monument's natural and human histories, its Rim Rock Drive and diverse other attractions, features and resource values.

The following resources and opportunities were determined to be significant in relationship to the purpose of the monument and of scientific and public interest.

NATURAL FEATURES

Arches

Rattlesnake Canyon and environs contain an exceptional concentration of rock arches uncommon to the erosional features within the adjacent, existing monument. The morphology of these arches is also notably different from that of those in Arches National Park. Those in Arches NP are predominantly vertical features eroded through tabular, free-standing fins of sandstones that were created by stress-jointing of the earth's bedrock. In comparison, the predominantly horizontal arches adjacent to the monument are of the pothole variety, whose formation is dependent upon the dissolution of mineral cements by down-sweeping ground water. No major concentration of pothole arches is currently represented in the National Park System and such features would be a significant and complementary addition to interpreting erosional processes which helped shape the northern portion of the Colorado Plateau.

Alcoves

Over countless millennia, stream flows in upper Mee Canyon have carved an exceptionally large, undercut oxbow into the base of the Wingate Sandstone. This cave-like alcove, some 300 feet wide, 320 feet deep and 175 feet high, rivals some of the great natural amphitheaters along the main stem of the Colorado River that were forever drowned by the filling of Lake Powell in Glen Canyon. Such features are not represented in the existing monument and would complement its purpose.

Fossil Resource

The study area is known to contain the fossilized remains of sycamore flowers (*Platanus*). These fossils are so superlative and rare in character that, to quote Dr. David Dilcher, professor of Paleo-botany at Indiana University, "This new evidence from Black Ridge requires that we revise our thinking about the history of flowering plants....There is no question that the discovery out on Black Ridge will produce a change in our understanding and interpretation of the fossil history of flowering plants."

The unique feature of this fossil that has yielded so much information is the three-dimensional and extremely fine detail captured in the fossil itself. These qualities are the result of an uncommon erosional condition whereby "very fine clay, which must have been mixed in with water carrying the sands, had settled inside and around the empty cavities of each seedhead." This condition resulted in a three-dimensional imprint of the seedhead. The preservation of this approximately 115-million-year-old plant and its eventual exposure is uniquely related to erosion, the process and force that created the monument and represents the purpose for its establishment.

Colorado River

Colorado National Monument is currently isolated from the Colorado River, whose local presence and erosional influence are important, but now remote parts of the area's geological story. The addition of this resource would afford enhanced opportunities for direct interpretation of a closely related resource and its effects on the development of the monument's landforms.

OPPORTUNITIES FOR PUBLIC ENJOYMENT

The various resources previously mentioned as well as the solitude, scenery and wilderness character associated with the various canyons and uplands of the Black Ridge area, collectively represent a superlative opportunity for public enjoyment. Such resources and opportunities would complement and coincide with the purpose for which the monument was established.

The Colorado River, like the primary roadway system through the national monument, has become one of the primary and more popular access routes to the resources of the Black Ridge Canyons area. The Colorado River, from the Loma boat launch site to the

Colorado/Utah State line (20.7 miles) and beyond, was also determined to be eligible for inclusion in the National Wild and Scenic Rivers System. This has drawn more attention to the river resource and consequently increased visitation to the Black Ridge Canyons area.

CONCLUSION

Based on the evaluation criteria and those significant resources and opportunities described above, it was determined that all of the lands described in Alternatives 1 and 2 would qualify for addition to the national monument.

Furthermore, if the lands involving Alternative 1, and even more so Alternative 2, were added to the monument, there would be strong justification for initiating action to change the status of the area to that of national park. This determination is based on the following values associated with the study area in combination with those of the existing national monument:

- Nationally significant and diversified resources.
- Exceptional and increased opportunities for interpretation of ecological components, geological and paleontological features.
- Increased, superlative opportunity for recreation and scientific study.
- High degree of integrity offered as a true, accurate, and relatively unspoiled example of a resource.

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ALTERNATIVES FOR MANAGEMENT

BASIS FOR FORMULATING ALTERNATIVES

Considering the expressed interest in the general area by the BLM and the NPS, and in view of the values the area offers in complementing existing Federal stewardships and management programs, alternatives for management were narrowed down to only those involving the two Federal Agencies. This rationale is further reinforced by the fact that both Agencies are represented locally with supporting infrastructure essential to properly and effectively administer the area. For the same reason, it was also determined there would be no real advantage in designating the lands as being under the administration of one Federal Agency, yet managed by the other. Furthermore, each Agency is currently managing similar resources nationwide.

The primary area of concern, as reflected in the legislative mandate to conduct this study, involved the Black Ridge Canyons Wilderness Study Area. However, the alternatives as presented herein reflect the need for adjustments that affect other lands outside the primary area. These adjustments were determined to be essential, taking into consideration various management and administrative needs as well as the magnitude of the type of alternative being considered, such as BLM's NCA and NRA designations, which involve other lands within the region. Therefore, each alternative must be evaluated on its own merits and then compared in terms of the tradeoffs associated with each alternative. The matrix identified in Appendix B was designed primarily to give a quick overview of the management differences and potential tradeoffs associated with each alternative.

In alternatives where the boundary of the national monument is modified to include other lands, a determination was made that the added lands would be feasible to administer considering the size, configuration, ownership, cost, outside threats, and other factors that would possibly impact management and administration of the subject land. All evidence indicates that through normal actions such as signing, routine patrols, and interagency coordination, the alternatives, as presented, could be easily administered with minimal impacts on visitor use, staffing and funding levels for each Agency involved. For those alternatives involving expansion of the monument boundary, additional planning would be required to assure appropriate access, determine development needs, and provide effective information and orientation services.

In cases where the boundary of the national monument is expanded, it is also assumed that existing adjacent land uses will continue at the same levels and not represent a threat to the lands added to the monument.

ALTERNATIVES

In the following presentation of alternatives, Alternatives 1 and 2 represent additions to

Colorado NM. The justification and formulation of these two alternatives are based on the rationale as presented in the previous section, *ANALYSIS OF SIGNIFICANCE*. Alternatives 3 and 4 represent management alternatives by BLM.

ALTERNATIVE 1: DESCRIPTION

This alternative provides for expanding the boundary of Colorado NM. The expansion would represent an increase of 77,230 acres including 3,700 acres of private land and approximately 13 acres owned by the town of Fruita, Colorado. The expansion would bring the total monument acreage to 97,700 acres. The expansion would basically include all of the lands east of the Utah State line to the west boundary of the Colorado NM and then south from the Colorado River to the north rim of Little Dolores River Canyon, Sieber Canyon and Black Ridge. This area would include major canyons such as Devils, Flume Creek, Pollock, Rattlesnake, Mee, Knowles and Jones as well as the other smaller canyons and mesa tops located between the major canyons.

Analysis of Alternative 1

The NPS would manage all of the lands acquired. This alternative would significantly change the long term management concept of the area involved from one of multiple use to one based on preservation of natural and cultural resources. Unless specifically provided for by Congress through enabling legislation, the NPS would seek to eliminate uses inconsistent with the preservation of natural and cultural resources or those which would conflict with visitor use and enjoyment of the area. Based on the preservation concept, uses such as grazing, hunting, mining and mineral developments, wood cutting, off-road-vehicle (ORV) use, etc., would be eliminated, most likely through a phaseout process. The Federal Government would be required to make just or fair compensation for all mineral or grazing rights acquired.

Considering the primitive character and scenic values recognized in the area, most likely development needs (i.e., roads, visitor and administrative facilities) would be very minimal and primitive in nature. At least initially, the existing visitor contact/administrative facility serving Colorado NM could easily serve the area involved in the expansion. Decisions, however, on the need, type, extent, and specific location of any supporting visitor or administrative facilities would be addressed in a General Management Plan/Development Concept Plan for the added lands. Such planning would commence only after the United States Congress authorized expansion of the monument boundaries. All Federal, State, and county Agencies as well as interested individuals and special interest groups would be encouraged to fully participate in the preparation of such planning documents.

Colorado NM is currently isolated from the Colorado River, whose local presence and erosional influence are important, but presently remote parts of the area's geological story. This alternative would permit adjustment of the monument boundaries to include extensive river frontage, thus affording enhanced opportunity for direct interpretation of a closely related resource and its effect on the development of the monument's landforms.

The scenic river corridor withdrawal associated with the alternative would continue to be managed with emphasis on protecting the scenic resources in view of the area's wilderness values and potential for being included in the National Wild and Scenic Rivers System.

Under NPS administration the private lands included in the alternative could be acquired through donation, exchange, or purchase. With regard to purchasing lands, the NPS, as a rule, would seek to acquire lands within its boundary based on a "willing seller - willing buyer" concept. The NPS is committed to overseeing efforts to ensure long-term protection of the resources as well as considering the interest of individual landowners within and adjacent to NPS administered lands.

The NPS would place a high priority on acquiring private lands within the boundary where use on such properties would pose a threat to park resources or visitor use and enjoyment. Those of high priority would include lands that block or make visitor access unreasonably difficult or those which, if developed, would create dominant, negative visual impacts that would detract from the visitors' experience and the natural setting. In cases where scenic or access easements are possible, such options would be considered. Other private properties for which the NPS would give a high priority for acquisition would be those within the scenic river corridor where future changes in land use might impact scenic values. This concept would be consistent with the 1979 Wild and Scenic River Study which stated, "...private lands along the Colorado River...should be preserved in their present natural or pastoral state." Efforts would be made to accomplish this under current ownerships. The Federal Government would also be required to make just and fair compensation for all lands acquired. Acquisition of the private lands involved under this alternative would also have a minor impact on the county tax base.

The paleontological and archeological resources would be protected, preserved and developed for public enjoyment, interpretation, and scientific research in accordance with park management objectives and approved resource management plans. Research by the academic community would be encouraged and facilitated under the terms of a research permits, providing institutions and individual researchers meet certain requirements as identified in the NPS *Management Policies*.

Although the sparse vegetation and precipitous terrain in the study area render it only marginally suited to livestock production, it is being grazed in accordance with multiple use practices. Alternative 1 would include some or all of the lands utilized for grazing in allotments 6123, 6125, 6130, 6135, 6136, 6138, 6141, 6142, 6143, 6154, and 6168. These parcels of public land -- totaling some 71,561 acres -- have been authorized to support 4,899 animal-unit-months (AUMs) annually. Average annual use has actually been only 2,388 AUMs, less than 1/2 the authorized amount. To exercise this privilege in 1988, four permittees paid $1.86 per AUM or an aggregate of about $4,500 in Federal grazing fees.

Alternative 1 also takes in approximately 27 small reservoirs, 12 miles of fencing, 1 well, 2 guzzlers, and 5 vegetative manipulation sites totaling approximately 1,000 acres. These improvements are primarily designed to facilitate livestock grazing operations, and, in some cases, improve wildlife habitat. In the belief that continued livestock utilization and

its recurring support activities would pose a long-term threat to the area's natural and cultural resource values, every reasonable effort would be made under NPS management to equitably phase out grazing and to remove or obliterate any appurtenant fences, dams, and roads that do not conform with or satisfy other NPS management objectives.

The alternative will include most of the area identified as desert bighorn sheep range. Sport hunting would be prohibited unless specifically provided for through legislation.

Alternative 1 includes approximately 25,666 acres of mule deer habitat that has been identified as "Critical Deer Winter Range." This area is hunted to a limited extent during the regular season, when most deer are still occupying higher terrain. Infrequently in the past, when deer herd numbers have peaked, a special late-season hunt has been authorized to help regulate the deer population and its potential to damage agricultural values on neighboring private lands. The Colorado Division of Wildlife (DOW) currently compensates private landowners in such cases. According to information received from the DOW, it has been approximately ten years since the last herd build-up that necessitated a special late season hunt. Factors that have helped control herd numbers since that special season include: two or three relatively severe winters and the issuance of a limited number of doe permits two of the last three years for an area west of Black Ridge.

Closure of the area to hunting could result in some increased wildlife damage to hay crops in the vicinity and might therefore increase the DOWs financial obligations, but the simultaneous cessation of predator control programs could help restore natural population control mechanisms and thus eventually offset, at least partially, any adverse impacts on agricultural values.

All mineral rights within the area under consideration in Alternative 1 are federally owned, excepting 565 acres of private land in seven parcels that range in size from 4 to 140 acres. Although the United States Geological Survey (USGS) has evaluated the area and considered its mineral potential to be low, it contains some 577 mining claims and, excluding those lands within the scenic river corridor, remains open to mineral location under the current mining laws. There are no mineral leases in the area, and it is currently closed to mineral leasing and mineral material disposal. All Federal lands added to the monument under this alternative would be closed to future entry. Appropriate actions would be taken to examine existing claims for validity and to acquire those legitimate interests that might conflict with NPS management objectives or pose a continuing threat to other resource values.

As indicated in Figure 3, Alternative 1 would include a portion of the utility corridor located along the northwest boundary of the monument. A right-of-way grant was issued to Grand Valley Rural Power Lines, Inc., by BLM for a 12,420-volt overhead distribution powerline. This powerline is the only source of power to Glade Park residents and many communication facilities on Black Ridge. This alternative would honor the need for such services, but efforts would be made to minimize the potential impacts of the existing and planned upgrading of that service.

Congress initiate action to change the status of the monument to that of national park, there would be no difference in the manner in which the area would be managed. This is also basically true with regard to NPS lands established as wilderness. The primary emphasis placed on lands designated as wilderness is to preserve the resources of an area in their natural condition. Lands designated as Wilderness are generally more restrictive with regard to certain types of developments and uses. Appendix B provides further clarification on restrictions associated with lands designated as wilderness.

Preliminary estimates indicate Alternative 1 would require an annual funding increase of approximately $25,700 in the budget for Colorado NM to administer those lands which would be added to the monument. Such costs would be subdivided as follows:

STAFF

(1) Seasonal (April-October) GS-5 Ranger	$9,800
(1) Seasonal (April-October) WG-5 Maintenance Worker	6,400

EQUIPMENT/OTHER

(2) GSA 4x4 pickups	$4,500
Miscellaneous Costs	5,000
Purchase/install 2 vault toilets at trailhead (one-time cost)	2,000
Purchase raft and related equipment (one-time cost)	2,500
Enhance radio system (one-time cost)	10,000
Total estimate, one time costs	$14,500
Total estimate, annual costs	$25,700

This alternative does not propose a significant change in development, operation costs, or land acquisition. A small negative economic impact would result from eventually precluding hunting, grazing, and mining. An effective marketing program could generate an increase in tourism (and tourism expenditures) of 5 to 15 percent. Even an increase of 2.5 percent (as shown in the following table) would result in a net positive impact.

Summary of Economic Impact

Activity	Value
Hunting loss	$ -22,000
Grazing loss	-147,000,
AUM fee loss	-4,500,
Mining loss	-1,000
Recreation fee gain	+3,000,
Tourism gain	+180,000,
Net benefit	$ +8,500

1. Value to rancher, not revenue to the Government
2. Revenue to Federal Government
3. Conservative 2.5 percent increase

This summary is based on a detailed assessment included in Appendix A.

ALTERNATIVE 2: DESCRIPTION

This alternative also provides for expanding the boundary of Colorado NM. Alternative 2 would incorporate all of the lands discussed in Alternative 1, plus that area along the Colorado River that is being considered for designation under the Wild and Scenic Rivers Act. It includes a 21-mile section of the river and an associated strip of land that extends approximately 1/4 mile north of the river in a corridor from the Loma launch ramp downstream to the State line. The additions under this alternative would also include the Fruita Paleontological Site, an area of about 280 acres whose scientific value has warranted its designation as an Area of Critical Environmental Concern (ACEC). Alternative 2 would represent an addition of 83,600 acres to the monument, including 4,886 acres of private land bringing the total to 104,070 acres.

Analysis of Alternative 2

This alternative would include those factors identified in the *Analysis of Alternative 1* plus the following:

The NPS would assume administrative control of the Colorado River and all of the public lands within the area north of the river that are being considered for inclusion in a designated scenic corridor. NPS Management of the river is deemed important, since the river is a significant recreational resource in its own right, and since a growing number of the recreationists entering the addition for such land-based pursuits as sightseeing, hiking and camping might also reasonably rely upon the river as a principal avenue of access. BLM estimates that 65 percent of the visitors to the lands identified in Alternative 1, use the river for access. Sole NPS proprietorship of the river, adjacent corridor and study area (as opposed to the dual administration envisioned under Alternative 1) would consolidate management under just one Agency and thus simplify efforts associated with visitor and resource protection, interpretation and provide adequate and consistent levels of visitor services.

Due to the steep cliffs north of the river which limit livestock access, only two grazing allotments (6612 and 6604) will be affected by this alternative. Approximately 3-4 percent of the AUMs in each of the allotments would be affected. (Refer to Appendix C.) These allotments also contain two fencing projects and one small reservoir designed primarily to facilitate livestock grazing operations. The lands adjacent to the river are critical to livestock grazing, considering the river is the primary source of water. As previously stated, unless specifically provided for by legislation, grazing would be ultimately phased out.

The alternative includes approximately 4,883 acres of private land. Approximately 727 acres of the private lands in this alternative have outstanding mineral interests.

This alternative would not affect the status of the existing Denver and Rio Grand Western Railroad right-of-way along the north bank of the Colorado River.

The scenic river corridor north of the river was also withdrawn from mineral leasing and

there are no outstanding mining claims within the area. The area is, however, open to mineral location under the general mining laws.

The issue concerning water rights implications related to expanding the monument boundary to include the Colorado River are secondary in that the decision to embrace or reject such rights rests with elected representatives who introduce the enabling legislation that would address such rights (refer to Appendix D).

The same general management concept for managing the paleontological resources identified in Alternative 1 would also apply to the 280-acre Fruita paleontological site included as a part of Alternative 2.

In summary, the socioeconomic impacts associated with this alternative would be the same as those associated with Alternative 1, with the exceptions of the administrative costs (outlined in the following paragraph) and grazing. An additional 40 AUMs to be excluded, representing a total value of $1,200 to the ranchers. This would also represent an additional decrease of $74.00 in revenue to the Federal Government as compared to Alternative 1. (Refer to Appendix A.)

Preliminary estimates indicate Alternative 2 would require an annual funding increase of approximately $45,800 in the budget for Colorado NM to administer those lands which would be added to the monument. Such costs would be subdivided as follows:

STAFF	
(1) Seasonal (April-October) GS-5 Ranger	$9,800
(1) Seasonal (May-September) GS-5 Ranger	7,000
(1) Seasonal (April-October) WG-5 Maintenance Worker	10,700
(1) Seasonal (May-September) WG-5, part-time Mntnce Wrkr	4,300
EQUIPMENT/OTHER	
(2) GSA 4x4 Pickups	6,500
Miscellaneous Costs	7,500
Purchase/install 4 vault toilets, 2 at trailhead and 2 at Loma Boat Launch (one-time cost)	4,000
Purchase raft and related equipment (one-time cost)	2,500
Enhance radio system (one-time cost)	10,000
Total estimate, one time costs	$16,500
Total estimate, annual costs	$45,800

This alternative does not propose a significant change in development, operation costs, or land acquisition. A small negative economic impact would result from eventually precluding hunting, grazing, and mining. An effective marketing program could generate an increase in tourism (and tourism expenditures) of 10 to 20 percent. Even an increase of 5 percent (as shown in the following table) would result in a net positive impact.

Summary of Economic Impact

Activity	Value
Hunting loss	$ -22,000
Grazing loss	-148,000,
AUM fee loss	-4,600,
Mining loss	-1,000
Recreation fee gain	+6,000,
Tourism gain	+360,000,
Net benefit	$ +190,400

1. Value to rancher, not revenue to the Government
2. Revenue to Federal Government
3. Conservative 5 percent increase

This summary is based on a detailed assessment included in Appendix A.

ALTERNATIVE 3: DESCRIPTION

This alternative provides for continued management of the Black Ridge WSA by the Bureau of Land Management. Approximately 68,700 acres of land are included. (Reference Figure 4)

BLM identifies three basic options that might apply to future management of the study area under Alternative 3. These are: (A) continued management under Interim Management Plan, now in effect pending formal wilderness determination, (B) management, after congressional determination, as part of the National Wilderness Preservation System, and (C) management, after congressional determination, as non-wilderness recreation lands. Though nominally different, the three options are addressed as one alternative because they represent only subtle actual differences in management approach under BLM's multiple use guidelines. In one form or another, each option has already been considered in BLM's approved Resource Management Plan.

Analysis of Alternative

This section analyzes the three following options:

Option A, Existing Management; Option B, Management as Wilderness; and Option C, Management as Recreation Lands. Since management direction under Options B and C will not vary radically from Option A, Existing Management, only the differences are discussed for the latter two options. All other program management actions would remain the same as discussed under Option A.

Option A, Existing Management. The BLM would continue to manage all of the lands they currently administer. The central theme for managing the area described as the Black Ridge Canyons Wilderness Study Area, Figure 4, is based on the concept that the scenery, natural, and other resources would be protected while being utilized to satisfy

the broadest possible range of consumptive, extractive and recreational use in a multiple use management context.

The Federal Government owns all mineral rights within the area identified as WSA. There are no mineral leases is the WSA and the area has been classified as not prospectively valuable for oil, gas or coal. The area within the WSA is closed to mineral leasing and mineral material disposal (i.e., sand, gravel, moss rock, and building stone).

The WSA will remain open under the mining laws to mineral location (i.e., gold, silver, platinum, and copper). There are approximately 577 mining claims in the WSA which were filed after the Federal Land Policy and Management Act of 1976 (FLPMA). There are no existing claims with development rights that precede passage of FLPMA. BLM declared all claims with filing dates prior to FLPMA as invalid due to lack of assessment work.

Prior to approving plans for operations on post-FLPMA claims, the BLM would conduct an examination of claims to verify whether a valid claim exists. The validity examination would consider whether administrative procedures were properly followed by the claimant, whether the minerals claimed are actually there, and whether the minerals, if present, can be mined at a profit.

In the event a claimant is determined to have a valid post-FLPMA mining claim in the WSA, the BLM would have to be satisfied of the following before approving a plan of operations for mining:

> There would be no unnecessary or undue degradation of wilderness character. Mechanical or motorized equipment, including helicopter and fixed wing aircraft (beyond casual use) would be used, only if there no reasonable alternative.
>
> The reclamation measures included in the plan of operations would be adequate to provide for restoration as near as practicable of the surface of the land disturbed. (i.e., clearing vegetation for mining access roads, buildings, motorized equipment pads, etc., could be permitted in wilderness providing they do not jeopardize wilderness values and their long-term impact can be mitigated.)

As previously stated, the proposed national scenic river corridor was withdrawn from mineral location when legislation was passed in 1974. Recently, the withdrawal was extended by the BLM/Department of the Interior with a five year emergency withdrawal which will protect the corridor pending a congressional decision. There are no valid claims within the area withdrawn.

The only exceptions to these conditions are the 1,500 acres of non-wilderness BLM lands not withdrawn from mineral entry in the WSA recommended boundary. Development on these lands, however, would not be allowed if it would cause unnecessary or undue degradation of public lands.

Livestock grazing is allowed in WSAs as a grandfathered right. It is allowed to continue in the same manner and degree which was existing prior to passage of FLPMA in 1976. This means that grazing in the WSA may continue as long as negative physical and aesthetic impacts resulting from the use do not increase. Refer to Appendix C for data on current grazing allotments. Any new project to support livestock grazing would be closely monitored to assure compliance with the general guidelines stated above.

There are several recorded paleontological sites in the WSA. Collecting is allowed only under BLM authorized permit. Permits for collecting are authorized only for scientific reasons.

All of the WSA, which excludes the utility corridor on the east side, will continue to be managed as a Visual Resource Management Class I area. The river corridor north of the river and WSA will continue to be managed as a VRM Class II area. The standards set by these classifications will continue to be applied to any future activities or projects considered for the WSA.

Air quality of the WSA and river corridor would continue to be managed under the Clean Air Act Amendment of 1977 as Class II for prevention of significant deterioration standards.

BLM would continue efforts to acquire certain parcels of private land within the WSA. Presently, negotiations are under way to acquire private land adjacent to the Loma boat launch using Land and Water Conservation funds. The Loma acquisition is viewed by the BLM as a key to proper management of river use and use of surrounding areas including the WSA.

Watershed restoration would be considered only where deteriorated soil and hydrologic conditions threaten life, property, or wilderness values, and where natural recovery would be unlikely. Water structures would be maintained if it is determined they are in the interest of the general public or if they serve a valid existing right, such as livestock grazing. Only actions or projects which maintain or enhance water quality, consistent with the protection of wilderness values, would be considered.

Harvesting of firewood or other woodland products, either commercial or private, would not be allowed in the WSA or river corridor. Tree cutting would only be allowed in fire emergencies or for insect or disease control.

Under wilderness IMP, a wide variety of wildlife-related activities and projects may be allowed as long as they satisfy non-impairment criteria.

Hunting, fishing, and trapping would be permitted by the BLM consistent with Colorado State game laws.

As requested by the Colorado DOW, approximately 25,666 acres of the WSA have been designated as critical deer winter habitat (winter concentration area). The critical deer winter habitat also extends south on BLM lands outside of the WSA. Presently, there is

an ongoing study designed to deal with a critical deer wintering problem involving deer concentrations, primarily in the west end of the study area and just west of the study area across the Utah border. Once the results of ongoing studies are known, BLM would work with wildlife officials on hunts, consistent with not impairing the WSA.

The BLM would continue to work with the Colorado Division of Wildlife for management of the desert bighorn sheep and their habitat and permit hunting of the species.

BLM excluded from the WSA a utility corridor situated between the east boundary of the WSA and the west boundary of Colorado NM. The powerline was in place when the wilderness inventory was done and would remain.

Actions taken to improve access, including construction and maintenance of trailheads and trails would continue.

No shooting zones would be established on several areas in and adjacent to the WSA for protection purposes. This would include areas such as the Rattlesnake Arches area and Loma boat launch site.

Public information on the resources associated with the river and WSA would continue to be provided by both BLM and NPS.

Option B, Management as Wilderness. Since existing management of the WSA is directed by strict wilderness interim management guidelines designed to protect the WSAs until Congress makes its decision, management as wilderness after designation would change little from present management. There would be the permanence of status and manageable boundaries and perhaps additional funding to go along with the designation, but individual resource program decisions would mostly remain the same.

As designated wilderness, the area would be closed to mineral location. As indicated under Option A, there are no valid pre-FLPMA claims or any approved mining operations in the area evaluated. Prior to approving plans for operations on post-FLPMA claims, the BLM would conduct an examination of claims to verify whether a valid claim exists. The validity examination would involve the same procedures as listed under *Option A, Existing Management.*

In the event a claimant is determined to have a valid mining claim and the claim was filed prior to the wilderness area being included in the Wilderness Preservation System and withdrawn from mineral location, the same requirements as listed under *Option A, Existing Management* would apply.

The WSA would be permanently closed to mineral leasing, which would mean oil/gas and coal. Also, the study area would be permanently closed to mineral materials sales and free-use permits.

The WSA would be closed to consideration of new utilities. The utility corridor between the Colorado NM and the WSA would be expanded to 1/4 mile. The BLM would allow

maintenance of the Grand Valley Rural Electric Association powerline within the corridor, consistent with protecting the amenities of the area. Because this is the only utility corridor to provide additional service needs in the Glade Park area, BLM will allow new utilities to be constructed within the corridor, subject to the strict Class II visual requirements for the corridor.

Formal designation of the area as wilderness would most likely result in a special designation on maps that would draw additional people to use and enjoy the study area. Previous experience of designating wilderness has demonstrated this to be the case. BLM would have to deal with the increased use to assure that the wilderness character was maintained.

Option C, Management as Recreation Lands. As indicated earlier, if Congress decides not to designate the lands within the WSA as wilderness, protective management would remain very close to existing management. The WSA would be identified as the Black Ridge Recreation Lands, which is a BLM administrative designation, and managed to preserve and enhance recreation values. Changes from existing management are described below.

The BLM would petition the Secretary of the Interior to withdraw those lands identified as WSA from mineral location. Strict conditions would apply to development of existing mining claims. A BLM approved plan of operations would be required before development would be allowed. BLM would have to be satisfied that a valid claim exists, with minerals present which can be mined at a profit before approving such a plan. If mining occurred, the BLM would allow it providing unnecessary degradation of public lands did not occur.

The lands designated as WSA would also be closed to mineral leasing, except for a 1/2-mile buffer around the edges which could be leased for oil and gas, subject to a no surface occupancy stipulation. The WSA would remain closed to mineral material sales.

As with Option B, Wilderness, the 1/4-mile utility corridor on the east side of the area identified as WSA would be authorized, with the remainder identified as unsuitable for public utilities.

Without the wilderness designation or IMP, vehicles would be allowed on designated roads and trails. Some roads closed to protect wilderness values could be opened, such as the BS Road and the Colorado Ridge Road, scheduled to be closed in the future.

ALTERNATIVE 4: DESCRIPTION

Given the resources and uses within and adjacent to the study area, this alternative would provide the opportunity to identify and place a national designation on a much larger area either as a National Conservation Area or National Recreation Area. These designations

would represent a broader umbrella under which the options described in Alternative 3 could fit without changing their intent.
The NCA or NRA designations are essentially a change in name only and management actions under both would coincide with the way BLM is currently managing the study area. These designations would not effect future emphasis that might be placed on the study area as Wilderness or Wild and Scenic River. Congress could designate a wild and scenic river and/or wilderness area which would be an integral part of an NCA or NRA.

Since the management of the study area would remain the same under NCA or NRA designation and neither would change any of the management options as described in Alternative 3, this alternative basically represents an independent step designed to place "National" emphasis on the WSA and adjacent lands. The exact designation of an NRA or NCA would be determined by a plan or recommendation from BLM and the actual establishment of either would require congressional action. However, for the purpose of this study, BLM identified, in Figure 4, what they felt would qualify as an NCA. The management decisions which would govern programs under the designation as an NCA are already in place as a result of the RMP/EIS.

Since the geographic area of the NCA, as identified in Figure 4, would be the same for an NRA, the following analysis describes the general public land resource framework which includes the WSA and forms the basis for establishing an NCA.

Analysis of Alternative

Figure 4 identifies the boundary in Colorado for a logical NCA. According to BLM, it is logical to expect that the NCA would also include BLM lands in Utah, should it become a reality. The proposed NCA in Colorado would contain an estimated 104,000 acres of BLM land, 13 acres belonging to the town of Fruita, Colorado, and 9,000 acres of private land. This NCA is consistent with the way BLM presently views management, in that program decisions and resource uses are inter-related and not fragmented by a particular program emphasis area or particular designation. The NCA is rather solidly blocked BLM land with negotiations presently under way to acquire many of the private inholdings from willing landowners.

The NCA would include sites that are known to paleontologists not only on a national basis, but also international basis. Examples of known sites under intensive management either directly by BLM or through agreement with the Museum of Western Colorado, include: Rabbit Valley Research Natural Area, Stegosaurus, Split Rock, Fruita Paleontological Research Natural Area, Dinosaur Hill, Black Ridge Angiosperm.

The unique recreation, scenic, and biological resources identified in the prior alternatives would be included with the NCA.

The Colorado River with all of its obvious amenities and recreational outlets, would be an integral part of the NCA.

Rabbit Valley is important as an area open to motorized vehicles on roads and trails, to

organized equestrian events, to individual activities, and as a group-event area.

The recently developed Kokopelli's Mountain Bike Trail is receiving national attention, and is expected over time to grow in reputation.

The entire NCA provides a broad spectrum of recreational uses for individuals having diverse interests. It would draw local people as well as people from outside of the region.

In summary, BLM lands in the NCA are completely covered by management decisions derived from the RMP/EIS and individual program activity or site development plans. The NCA would remain in multiple-use and retain the existing management decisions. The BLM would submit an NCA plan prepared with public review, to the Congress which would set the unique values to be protected by legislation. National designation would allow for more attention and recognition to be given to the NCA resources and a special designation would be placed on all BLM literature to distinguish it from other BLM lands. The WSA would be a part of the NCA, either under Existing Management, Management as Wilderness, or Management as Recreation Lands.

National Recreation Area. As previously stated, since the geographical area for an NRA is identical to the NCA and all program uses and decisions the same, the NCA discussion also applies to an NRA. The emphasis may slightly differ over time due to the different label.

APPENDIX A:
SOCIOECONOMIC AND VISITOR USE ASSESSMENT

Social setting. Social values and lifestyles within the planning area are characteristic of rural counties in western Colorado. Lifestyles are primarily rural and a high value is placed on independence, open space, and outdoor recreational opportunities. Thus, the resources managed by the Federal Government are of interest to much of the population.

Many residents value the rural character of the area as an important part of their lifestyles. An appreciation for the wide-open spaces, natural values, solitude and personal freedom is widespread. Many residents resent control of land or any kind of outside interference. Government participation in projects is generally solicited only when problems cannot be solved locally.

Population. The Grand Valley has long been the transportation, communications and service center for western Colorado and eastern Utah. Mesa County is consequently the most populous in western Colorado and will likely remain so. About 90 percent of the county population lives in the Grand Valley between Palisade and Loma. Population per square mile of private land is similar to that of counties in the Denver suburban area.

Population

Area	1983 Population	1970-1983 Change
Fruita	3,079	69 percent
Grand Junction	30,693	52 percent
Rest of Mesa County	54,172	67 percent
Mesa County	87,944	62 percent

Source: Bureau of Economic Analysis

Population growth. Until the 1970s, population growth lagged behind the State average. After 1970, however, the rate of growth increased, averaging just under 7 percent a year between 1977 and 1980. Most of the increase was due to immigration brought about by the development of energy minerals. Population growth came to an abrupt halt in 1982 with the closure of several large oil shale projects and a slowdown in development of other energy resources.

The magnitude of future population growth is highly dependent on the degree to which western Colorado energy fuel resources are developed. Without significant energy development, growth is expected to be less than 1 percent annually. Active energy development might result in an annual growth rate in excess of 2 percent, a rate similar to that of the early 1970s.

Employment. In 1982, 42,301 people were employed in Mesa County jobs. Employment in three sectors - retail trade, services, and government - makes up almost 60 percent of Mesa County's total wage and salary employment, reflecting the county's role as western Colorado's trade and service center. The local economy is more diversified than other western Colorado counties.

1982 Employment by Sector

Sector	Mesa
Farm	2 percent
Agricultural Services	1 percent
Mining	6 percent
Construction	9 percent
Manufacturing	7 percent
Transportation & Utilities	7 percent
Wholesale Trade	5 percent
Retail Trade	22 percent
Finance & Real Estate	4 percent
Services	21 percent
Government	16 percent

Source: Bureau of Economic Analysis

Mesa County employment increased 34 percent between 1977 and 1983. The majority of this increase occurred in the retail and services sectors. Unemployment has tended to parallel State levels. A sharp upturn in late 1982 was the direct result of the slowdown in energy development activities.

The size and complexity of Mesa County's economy reflects its role as a supplier of goods, services, and labor to a large part of western Colorado and eastern Utah. Because it relies on activity over such an extensive area, the economy is less sensitive to management changes on nearby Federal lands. None of the alternatives considered in this plan will have a measurable impact.

Coal, Oil, and Gas. The one operating coal mine employs about 200 persons and is partially on public land. Sizeable tracts of Federal coal have been leased in the area during the last decade but development has been slowed due to the lack of demand.

In 1980, the oil and gas industry directly employed over 1,500 people. Subsequent declines in oil and gas production resulted in substantial layoffs and business closures.

BLM classifies the study area as *not* prospectively valuable for oil/gas or coal. No mineral leases exist in the study area and it is closed to future leases.

Other minerals. The study area is closed to mineral material disposal, typically classified as saleable minerals. Examples of this category are sand and gravel, moss rock, and building stone.

Most of the study area is still open under mining laws to mineral location. This involves minerals such as gold, silver, platinum, and copper which are classified as locatable minerals. There are approximately 577 mining claims associated with Alternative 1. The lands added as a result of Alternative 2 are within the scenic river corridor which is free of any claims. A one-half mile strip along the river corridor has been withdrawn from mineral location pending a decision on designation as a National Scenic River. None of the mining claims is in this area.

BLM requires an approved plan of operations (with very restrictive development conditions) prior to any mechanized work on a claim. This approval process should prevent any action which would impair wilderness suitability. This restriction does not apply to the 1,500 acres outside the WSA. BLM proposes to withdraw the entire study area from mineral location to provide long-term resource protection for recreational values.

Agriculture. Although agriculture still exerts a strong influence on the character of the region, employment and income data emphasize the diminished economic role of agriculture. Farm labor makes up only 2 percent of the total work force. Farm proprietors' income has become an erratic and declining contributor to area personal income, averaging less than 1 percent of the total over the years 1977 to 1981.

Most of the study area is utilized for livestock grazing. Elimination of this grazing would have only a very small effect on the local economy. Due to declines over the last decade, livestock production has ceased to be a major economic factor. In 1980, about 1.5 percent of the county's total employment and less than 1 percent of the county's total income were tied to livestock production.

However, a few individual ranchers could be significantly affected by reduction of their allotments. Four livestock operations depend upon forage from the study area. While the forage supplied by this grazing is only a portion of that used by the ranching operations, most of the forage is used during the winter and spring time, which can usually only be replaced by expensive feeding operations and is usually critical to the success of a ranching operation. All four ranchers indicate that without the forage supplied from the

study area, their operations would experience a severe negative impact.

The four livestock operations are allowed a maximum of approximately 4,899 AUMs within the study area. At $30 per AUM this represents a total value to these ranches of $146,970. The *actual* use in recent years has been approximately 2,388 AUMs. At the present charge ($1.86 per AUM) the Federal Government realizes an average revenue of $4,442 per year from the grazing. By way of contrast, in 1988, Colorado NM generated $112,118 in Federal recreation fee revenue.

Strictly speaking, the above grazing impacts apply to Alternative 1. Alternative 2 would have a slightly greater impact ($1,200) due to the inclusion of an additional 40 AUMs. This would also represent a decrease of $74.00 in Federal Government grazing fees as compared to Alternative 1.

Forestry. Mills in the area produce about 10 million board feet of lumber annually, but only small amounts of that currently come from BLM lands and none from the study area. The primary product from these woodlands is firewood. Within the study area, BLM prohibits harvesting for any private or commercial purpose. Tree cutting is only allowed for fire emergencies or for control of insects and disease.

Income. Per capita income for Mesa County in 1981 was estimated at $9,821, slightly less than the Colorado State average of $10,033. The cost of living in the Grand Junction area is slightly less than that of most American cities.

Tourism. Public use of the study area is related to two basic geographic features: the uplands and canyons of Black Ridge, and Ruby Canyon on the Colorado River. The uplands and canyons of Black Ridge are managed as Wilderness Study Areas.

River use. The Colorado River corridor from the Loma boat launch to the Utah State line is generally known as Ruby Canyon and is considered flatwater (Class I). Immediately downstream in Utah is Westwater Canyon which contains major whitewater rapids (Class III+). About 65 percent of access into the study area is via boating on the Colorado River This provides camping and hiking access from the mouths of several canyon systems.

Most of the use of Ruby Canyon is by non-motorized floatboat users. About 75 percent of the floating is done in inflatable rafts with the rest distributed between canoes and kayaks. About half of the floatboat users continue on through Westwater Canyon, making typically a two or three day boat trip involving shoreline camping and hiking.

Approximately 40 percent of the floatboat use is conducted by 12 commercial river outfitters under Special Recreation Permits issued by BLM. Almost all of these trips continue on through Westwater Canyon. The remaining 60 percent of floatboat use is by private boaters, typically in smaller groups. In most years, the majority of floatboating occurs in April through October.

BLM plans to continue their attempt at informal campsite use rationing in Ruby Canyon. No use restrictions have been implemented but a permit system may be necessary in the

future to allocate and/or ration use.

BLM is currently working to expand the capacity of the Loma boat launch. This expansion is viewed as a key to proper management of river use and use of surrounding areas.

About 5 percent of the river use is by motorboats, primarily hunters (waterfowl and deer). Motorboats are also used in the spring and fall for catfish fishing.

1988 Recreation Visits

Colorado National Monument (TOTAL)	374,735
Black Ridge study area (TOTAL)	21,500 (conservative estimate)
day hiking	5,000
backpacking	500
mountain biking	1,200
off-highway vehicle (to arches)	1,700
floatboat users	6,000
motorboat users	1,000
shoreline camping (by boaters)	4,500
fishing (mostly? by boaters)	500
deer hunting (partly by boaters)	400
waterfowl hunting (partly boaters)	700

Much of the study area use (especially floatboating) is by visitors from outside the region. This results in some overnight stays in the adjacent communities and in Colorado National Monument.

Vehicular use. The study area has been designated a WSA and vehicle traffic has been restricted to a few designated roads. BLM plans to continue this restriction regardless of possible Wilderness designation.

Approximately 1,700 motorized users and 1,200 mountain bike users came in 1988. Both types of use appear to be increasing at least 5 percent per year. About 35 percent of access is by motor vehicle, usually high-clearance four-wheel-drive. Most of this use is to gain access for hiking to the arches in Rattlesnake Canyon, but other significant uses include mountain biking, deer hunting, and hiking in other canyon systems such as Knowles and Mee canyons. BLM plans to close some existing roads in Ruby Canyon.

There is a noticeable urban influence zone and correspondingly higher level of public use in the Devils, Flume, and Pollock Canyon area, which is accessible by two-wheel-drive vehicle virtually year-round. In the winter, mud and snow results in the remainder of the study area being impassable to motor vehicles.

Hunting. Two hunting outfitters have Special Recreation Permits to operate in Ruby Canyon. The entire study area is open for hunting (primarily waterfowl and deer). 1,100

hunters used the area in 1988. Target shooting is allowed throughout the area but restrictions will be imposed at the Rattlesnake Canyon arches and at the Loma boat launch.

Since virtually all of these hunters are local residents, their average daily expenditure while hunting is probably quite low. If they spent $20 per day, expenditures attributable to the study area would total $22,000.

Visitation projections. BLM has increased visitation to the study area through public information and a long-term effort to advertise the entire area through the press. There may be potential to increase visitation a little more through increased highway signing and by providing information to national monument visitors. Distribution of BLM's planned Black Ridge trail map will also increase visitation somewhat.

BLM estimated that most categories of visitation are increasing by at least 5 percent per year. Off-highway vehicle use has decreased as a result of recent closures inside the WSAs. However, use of all-terrain vehicles and mountain bikes is increasing at a rate greater than 5 percent annually. This growth may soon slow since such use is now restricted to the road providing access into the Rattlesnake Canyon arches.

Deer hunting use has leveled off and is not projected to increase. Hunting of Bighorn Sheep is projected to increase in the future but will always remain very low.

The most optimistic reasonable increase for the Black Ridge area would be doubling of visitation between 1988 to 1998. While this would represent a large percentage increase, the actual increase in visitors (21,500) would be equivalent to less than 6 percent of existing 1988 recreation visitation (374,735) to the national monument. The greatest potential for increased visitation will result from lands presently included within the monument. The fact that recreation visits at the monument increased 34 percent from 279,492 in 1983 to 374,375 in 1988 underscores this potential. Total visits, recreation and non-recreation, increased from 795,180 in 1983 to 920,898 in 1988.

None of the alternatives would automatically result in an increase in tourism, and in the absence of vigorous promotion, simply changing the designation of a unit from monument to park status might have no measurable effect on visitation. On the other hand, tourism can be expected to increase in response to active marketing efforts, and indeed, an expanded monument or park envisioned by Alternatives 1 or 2 would directly and strongly appeal to two of the three marketing groups specifically targeted by the Colorado State Tourism Board -- the market that prefers a touring vacation experience (families with children, senior citizens and others interested in sightseeing, attending cultural events, visiting historic sites, etc.) and the market that prefers outdoor vacation experiences (usually young, well-educated singles and families who prefer participation in camping, white-water rafting, cycling, hiking, riding, etc.). Only those seeking an up-scale resort vacation experience (ski area, dude ranch, or golf or tennis resort) would not be specifically attracted to the expanded monument or park discussed in Alternatives 1 and 2, though they might visit enroute to their primary destinations. The success of any tourism promotion would depend upon the energy put into it and upon the quality and

diversity of attractions to be marketed. Considering the increased name recognition associated with a change in status from monument to park, the new mix of land and water-based recreational opportunities afforded by the addition of the WSA and river corridor and the fact that recreational visits at the monument increased 34 percent from 1983 to 1988, an effective marketing program could realistically stimulate a 5 to 20 percent increase in tourism and related revenues.

Every increase of one percent in recreational visitation to the monument is equivalent to about 4,000 visitors. If each additional visitor, and particularly those of non-local origin, were to spend an average of only $18 in Grand Junction and environs, the immediate economic benefit of each percent of increased visitation would amount to some $72,000 per year, for a total of from $360,000 to $1,440,000 annually based on the modest 5 to 20 percent projection noted above. Each percent increase would also generate an additional $1,200 in Federal recreation fee revenues. According to a 1986 survey, fully 45 percent of the monument's summertime visitor entries at Colorado NM reflected an out-of-State origin, and another 25 percent hailed from Colorado's front-range communities.

Land acquisition. Most private lands within the Ruby Canyon river corridor and bordering the WSA are suitable for exchange (i.e., acquisition would be in the public interest). Most landowners involved have been in contact with BLM concerning the potential mutually beneficial land exchanges or acquisition with Land and Water Conservation funds. Several land and tenure adjustments are being negotiated at this time.

Funds have been appropriated and negotiations are under way to acquire private land adjacent to the Loma boat launch. Negotiations are under way to acquire high resource value shoreline in Ruby Canyon. BLM plans to acquire all private land in Ruby Canyon from willing landowners. These acquisitions are viewed by BLM as essential to long-term management and protection of the study area.

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APPENDIX B

ALTERNATIVES MATRIX

The primary purpose of this appendix is to give a general overview of the management differences and tradeoffs associated with the alternatives considered for managing the resources determined to be nationally significant. To accomplish this, the following Alternatives Matrix is provided.

APPENDIX B
ALTERNATIVES MATRIX

ALTER.**	DESCRIPTION OF ALTERNATIVE	ACREAGE INVOLVED			MANAGEMENT DIFFERENCES		
		BLM	PRIVATE	OTHER	GRAZING	WOODCUTTING	MINERALS LEASABLE/SALABLE/LOCATABLE
1 (NPS)	Provides for expanding the boundary of COLM to include all of the lands east of the Utah State line to the west boundary of COLM and then south from the Colorado River to the north rim of Little Dolores River Canyon, Sieber Canyon, and Black Ridge *2, *3	73,617	3,700	13 Town of Fruita Water Storage Site	In short term existing permits usually allowed to continue for time specified by Congress in enabling legislation. Eventually all grazing (avg annual use = 2,388 AUMs, auth. annual use = 4,880 AUMs) would be phased out to promote, as near as possible, a natural ecosystem. Routine use of motorized equipment and unacceptable levels of development to facilitate grazing would preclude consideration for wilderness.	Not Allowed.	Closed to all mineral entry. Valid existing rights are honored; existing claims (577) judged invalid are extinguished. Wilderness recommendations are subject to all mineral interests being relinquished, acquired, exchanged or otherwise being eliminated in the near future.
2 (NPS)	Provides for expanding the boundary of COLM to include all of the lands in Alternative 1 plus the area withdrawn by BLM to protect the scenic values of the Colorado River from the Utah State line east to the Loma boat launch area. This also includes the Fruita Paleontological site. *2, *3	78,701	4,886	13	Same as Alternative 1 except, (avg. annual use = 2,428 AUMs and auth. annual use = 4,939 AUMs)	Same as Alternative 1.	Same as Alternative 1.
3 (BLM)	**Option A, Existing Management, (IMP)** Includes those lands identified by BLM as WSA in Colorado. *** BLM will continue to manage the WSA in accordance with the Interim Management Policy and guidelines for lands under wilderness review (IMP). *3	68,737 *4	NA	NA	Permitted at existing authorized levels. (Avg. annual use = 2,388 AUMs, auth. annual use = 4,899 AUMs.) Occasional use of mechanized equipment may be justified to repair/restore stock dams and other grazing-related developments.	Same as Alternative 1.	Closed to oil and gas leasing. Open to mineral location. Restrictive development conditions exist because of possible wilderness impairment. Closed to mineral material disposal (sand and gravel, building stone, etc.).
	Option B, Wilderness Includes those lands identified by BLM as WSA in Colorado. If designated as wilderness by Congress, lands will be managed by BLM in accordance with the Wilderness Act of 1964 and the Resource Management Plan. *3	68,737 *4	NA	NA	Same as Alternative 3, Option A.	Same as Alternative 1.	Same as Alternative 3, Option A.
	Option C, Recreation Lands Includes those lands identified by BLM as WSA in Colorado. If Congress decides not to designate as Wilderness, the area will be identified and managed as the Black Ridge Recreation Lands by BLM.	68,737 *4	NA	NA	Same as Alternative 3, Option A. Usage could be increased.	Potentially open for harvesting. A portion of the WSA was identified as suitable for management and harvest of pinyon/juniper.	Open to leasing, location and development, and mineral material disposal.
4 (BLM)	**National Conservation Area (NCA) or National Recreation Area (NRA)** Includes those lands identified by BLM in Colorado only. This represents a larger area within which any of the options under Alternative 3 could occur.	104,000	9,000	13	Same as Alternative 3, Option A, except that additional allotments would be included north of river.	Probably same as Alternative 3, Option C.	Probably same as Alternative 3, Option A, but would depend on specific language in any enabling legislation.

*1 The missions of the NPS and BLM are uniquely different and represent an important and necessary concept in the management of our nation's resources. In reviewing each alternative, one must keep in mind that such differences often result in considerably different management guidelines. For reference purposes, the missions are as follows:

NPS MISSION

Conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations (Organic Act 1916).

BLM MISSION

Provide for the protection (including fire suppression), orderly development, and use of the public lands and resources under principles of multiple use and sustained yield. (FLPMA 1976. Government Manual)

*2 A change in status to national park would not significantly effect management. This is also basically true for NPS lands designated as wilderness. Any uses that could eventually effect wilderness potential are identified under "MANAGEMENT DIFFERENCES" column. This column also identifies management guidelines that may impact use of the area if designated as wilderness.

*3 It is assumed that all BLM lands outside the WSA will continue to be managed in accordance with BLM's current Resource Management Plan.

*4 The BLM recommended wilderness also contains an additional 5,200 acres which extend into Utah. The total area recommended for wilderness by BLM is 73,937 acres.

ALTS (CONT)	MANAGEMENT DIFFERENCES			
	PALEO/ARCHEOLOGICAL RESOURCES	WILDLIFE	THREATENED & ENDANGERED SPECIES	FIRE MANAGEMENT
1 (NPS)	Pending planning decisions, all cultural resources will be protected and preserved in their existing conditions. Paleontologic resources will be protected, preserved and developed for public enjoyment, interpretation and scientific research. Research by the academic community will be encouraged and facilitated under the terms of a research permit.	Management emphasis on minimizing human impacts on wildlife population dynamics. Appropriate treatments are taken to mitigate adverse effects of human activity on native wildlife species.	Identify, monitor and manage threatened and endangered or candidate species and their critical habitats. Active management programs, usually in cooperation with other Agencies, will be initiated to perpetuate natural distribution and abundance of threatened and endangered species and ecosystems on which they depend.	Under an approved fire management plan, zones are identified where a range of options including suppression, prescribed natural fires and prescribed fires are implemented.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	Archeology - protected, collecting by academic community allowed under permit. Paleo collecting allowed only under BLM authorized permit for scientific purposes. Some areas receive additional protection, i.e., Fruita Paleo Site.	Selective modifications of vegetation and topography to increase population and/or promote welfare of selected species. Except wildlife habitat improvements would be required to be compatible with protection of wilderness values.	Same as Alternative 1, except in long term may be impacted by grazing.	Same as Alternative 1.
OPTION B (WILDERNESS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 1.
OPTION C (REC. LANDS)	Same as Alternative 3, Option A.	Selective modifications of vegetation and topography to increase population and/or promote welfare of selected species.	Same as Alternative 3, Option A.	Same as Alternative 1.
4 (BLM)	Same as Alternative 3, Option A.	Same as Alternative 3, Option C.	Same as Alternative 3, Option A.	Same as Alternative 1.

ALTS (CONT.)	MANAGEMENT DIFFERENCES			
	VEGETATION	AIR QUALITY	VISUAL RESOURCE MANAGEMENT (VRM)	UTILITIES
1 (NPS)	Management emphasis on minimizing human impacts on natural succession. Remedial projects may be undertaken in accordance with approved plans to restore vegetative resources. In areas recognized for wilderness values, vegetative manipulation may be permitted only in cases where wilderness values or visitor safety are in jeopardy.	NPS monitors. Federal classification (Class II) would remain unchanged, unless redesignated Class I by State action. No change in allowable increment, no threat to economic development or to industries using best available controls.	Maintain natural scene within WSA. Should Congress decide not to designate wilderness, VRM would be based on the concept of *Preservation vs Multiple Use*.	Seek feasible alternative routes. If unavailable, continue to utilize existing right-of-way. Work with utility company to relocate transmission lines within right-of-way so as to minimize visual intrusion.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	Managed to accommodate special uses, such as grazing or to promote the welfare of certain big game species.	Federal Class II. No change in allowable increment, no threat to economic development or to industries using best available controls.	Until Congress decides whether or not to designate wilderness, maintain a pristine landscape within the WSA based on BLM Class I standards. Such direction is a legislative mandate. Visual resources along river corridor will be managed in accordance with BLM Class II standards.	1/4 mile utility corridor identified in Resource Management Plan. Corridor is outside WSA.
OPTION B (WILDERNESS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A, unless redesignated Class I by State action.	Maintain a pristine landscape based on BLM standards. Visual resources along the river corridor will be managed in accordance with BLM Class II standards.	Same as Alternative 3, Option A.
OPTION C (REC. LANDS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Should Congress decide not to designate wilderness, VRM would be an administrative vs legislative decision and would be based on the concept of multiple use. Visual resources along river corridor will be managed in accordance with BLM Class II standards.	Same as Alternative 3, Option A, except small utilities permitted across area if resource values could be protected.
4 (BLM) (NCA/NRA)	Same as Alternative 3, Option A.	Same As Alternative 3, Option A.	Until Congress decides whether or not to designate wilderness, maintain a pristine landscape within the WSA based on BLM Class I standards. Such direction is a legislative mandate. Should Congress decide not to designate wilderness, VRM would be an administrative vs legislative decision and would be based on the concept of multiple use. Visual resources along river corridor will be managed in accordance with BLM Class II standards.	Same as Alternative 3, Option A.

ALTS (CONT.)	MANAGEMENT DIFFERENCES			
	WATER RIGHTS	PRIVATE LANDS	MANAGEMENT OF LANDS & ACCESS BY ONE AGENCY	FACILITIES DEVELOPMENT
1 (NPS)	Congress, in any future enabling legislation, could specifically include or exclude reserve water rights. If included, any water rights would come from water then unappropriated under State law, would have a priority date as of the date of the new reservation, and would be for the minimum amount necessary to prevent defeat of the reservation's primary purpose.	Long-range goal is to acquire all private lands within park on willing seller/buyer basis. Lands would be restored as near as possible to natural condition. Proposed development, if contrary to park values, could result in acquisition by condemnation.	Primary overland access to area is through Colorado National Monument. Under NPS management, there would be a uniform policy relative to recreation fees, public information, and resource and visitor protection.	Would be determined upon completion of General Management Plan but immediate concerns would include sanitary facilities in areas of concentrated visitor use and routine grading of access road to Rattlesnake Canyon. Additional facilities restricted to developed zones along perimeter. If designated as wilderness facilities, would be limited to the types and number essential to meet minimum requirements for administration as wilderness area.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	N/A	Long-range goal in wilderness is to acquire all private lands on willing seller/buyer basis. Outside wilderness goal is to acquire for needed developments or to consolidate ownership. Agency has authority to negotiate land exchange.	Primary overland access to area is through Colorado National Monument. Potential for conflicts relating to imposition of recreation fees; additional workload and expense to COLM in law enforcement, visitor services, etc. generated by non-park-related use on adjacent lands.	To date, developments limited to signing, delineation of trails and trailhead parking and the grading of road to Rattlesnake Canyon.
OPTION B (WILDERNESS)	Same as Alternative 1.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.
OPTION C (REC. LANDS)	Same as Alternative 1.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A, plus area would be open to potentially any type of new development.
4 (BLM) (NCA/NRA)	Same as Alternative 1.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Depending on zones, some development may be needed.

ALTS (CONT.)	MANAGEMENT DIFFERENCES			
	VISITOR SERVICES	PUBLIC ACCESS	HUNTING	SHOOTING
1 (NPS)	Information, interpretation & visitor assistance services available on site 7 days/week at existing facility adjacent to resource. Scheduled services provided during peak seasons through ranger guided walks & campfire programs. Publications available throughout the year. Special programs available on request.	NPS works toward encouraging public access where private lands prevent same through easements and land acquisition. Provide access through trailheads and primitive trails. Vehicular access restricted to perimeter of area. River access by motorized and non-motorized craft.	Not permitted except where specifically authorized by Federal law. Reduced ability to control wildlife numbers may result in damage problems to adjacent lands. This may be partially offset by elimination of predator control. Probable increase in opportunity for watchable wildlife.	Loaded weapons of any kind not permitted in NPS units in order to provide for visitor safety and to reduce potential for poaching and vandalism.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	Visitor information & publications available weekdays only at office remote from resource. Presently no personal interpretive services available.	Agency proposes acquiring some private lands blocking access. Vehicles restricted to Rattlesnake Canyon access and perimeter of study area. River access by motorized and non-motorized craft.	Permitted subject to State hunting regulations.	Generally permitted. Can be restricted in areas of concentrated use (examples - Rattlesnake Canyon arches, Ruby Canyon and Loma Boat Launch)
OPTION B (WILDERNESS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.
OPTION C (REC LANDS)	Same as Alternative 3, Option A.	Existing roads can be reopened. River access by motorized or non-motorized craft.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.
4 (BLM) (NCA/NRA)	Same as Alternative 3, Option A.	Agency proposes acquiring some private lands blocking public access. Vehicle access south of Colorado River restricted to Rattlesnake Canyon and perimeter of study area. North of river existing roads and trails would remain open.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.

ALTS (CONT.)	MANAGEMENT DIFFERENCES				
	OFF-ROAD VEHICLES	CAMPING	BOATING	FISHING	PACK/SADDLE
1 (NPS)	The use of licensed motorized vehicles and mountain bikes limited to designated roads. The use of unlicensed vehicles not permitted.	Permitted. Open campfires are prohibited to protect biomass, reduce risk of forest fire and preclude contamination of dateable prehistoric hearth deposits. Backcountry use may be regulated if warranted by increased levels of public use, to discourage crowding and attendant resource impacts.	N/A	N/A	Permitted. Overnight users may be required to pack in processed feeds to reduce grazing impacts and potential for introduction of exotic plant species.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Motorized and non-motorized craft permitted to land on shore. Public use will be managed to prevent unacceptable impacts on aquatic resources or adverse effects on visitor enjoyment.	Permitted subject to State of Colorado regulations.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	Licensed and unlicensed vehicles and mountain bikes limited to designated roads. Special permits may be issued for administration of livestock grazing allotments.	Same as Alternative 1 except open fires are generally permitted. Camping can be restricted in areas of concentrated use, i.e., Rattlesnake Canyon and Ruby Canyon along the Colorado River.	Same as Alternative 2.	Same as Alternative 2.	Permitted.
OPTION B (WILDERNESS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A. As noted in GJ-BLM Draft RMP/EIS, primitive rec. use projected to increase 10-15% annually.	N/A	Same as Alternative 2.	Same as Alternative 3, Option A.
OPTION C (REC. LANDS)	Allowed on designated roads and trails. Some roads now closed could be reopened. May be increased trail-oriented ORV use.	Same as Alternative 3, Option A.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 3, Option A.
4 (BLM) (NCA/NRA)	Some areas could be zoned for ORV use.	Same as Alternative 3, Option A.	Same as Alternative 2.	Same as Alternative 2.	Same as Alternative 3, Option A.

ALTS (CONT.)	MANAGEMENT DIFFERENCES			
	COLLECTING	DOGS	LAW ENFORCEMENT/SEARCH & RESCUE	SOCIO-ECONOMIC IMPACTS
1 (NPS)	Casual collecting is not permitted. All resource values are fully protected. Collecting of non-endangered plants, animals, and geologic specimens and fossils for serious academic research may be authorized by specific permit.	Permitted in vehicles and on leashes in developed areas. To eliminate potential for conflicts with other visitors and impacts on wildlife, not permitted on trails or in the backcountry.	NPS maintains round-the-clock law enforcement and search and rescue capability. Maintains EMS capability. Concurrent jurisdiction enables NPS to enforce broad spectrum of both State and Federal laws.	Eventual phase out of grazing could have an adverse impact on individual permittees. Any economic benefits of sport hunting would be adversely impacted by its elimination. These adverse impacts would be offset at least partially, if not fully, by increased attraction to the area due to traditional name recognition of NPS areas. Watchable wildlife opportunities would at lease partially offset any adverse impact of hunting closure.
2 (NPS)	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.	Same as Alternative 1.
3 (BLM) OPTION A (IMP)	Collecting of rock specimens permitted. No vegetative matter can be collected without a permit. Collecting permits may be issued for serious academic research.	Permitted	Maintains limited law enforcement and relies on County Sheriff for search and rescue and EMS. Proprietary jurisdiction limits BLM to enforcement of resource-related Federal regulations.	Little change from present.
OPTION B (WILDERNESS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.
OPTION C (REC. LANDS)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.
4 (BLM) (NCA/NRA)	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Same as Alternative 3, Option A.	Could vary depending on management emphasis and zones.

APPENDIX C
GRAZING ALLOTMENT SUMMARY

No.	Allotment Name	Permittee	Livestock Class	Period of Use	Preference AUMs	Capitalized Ranch Value at $30/AUM	Average Annual AUM Use	AUMs in Study Area	Average Annual AUM Use in Study Area
6123	Upper Bench	A. Aubert	Cattle	W, Spr.	328	$ 9,840	293	295	264
6125	Lower Bench	A. Aubert	Cattle/sheep	W, Spr.	1,400	$42,000	842	1,400	842
6130	Colorado Ridge	G. Gore	Cattle	W, Spr.	660	$19,800	429	660	429
6135	Little Dolores Bench	G. Gore	Cattle/Sheep	W, Spr.	97	$ 2,910	63	93	63
6136	Knowles	G. Gore	Cattle	W, Spr.	234	$ 7,020	116	234	116
6138	Black Ridge	G. Gore	Cattle	W, Spr.	459	$13,770	429	239	223
6141	Burke	G. Gore	Cattle	W	100	$ 3,000	100	50	50
6142	Colorado River	Unallocated Base owned by Travelers Ins	Cattle	Spr Su, F	232	$ 6,960	0*	232	0*
6143	Radio Tower	G. Gore	Cattle	Spr	119	$ 3,570	66	56	40
6194	Last Canyon	C. Conover	Cattle	Spr, F, W	2,791	$83,370	602	1,619	340
6198	Rattlesnake	C. McNutt	Cattle	Spr, F	21	$ 630	21	21	21
	Subtotal Alt. 1				**6,441**	**192,660**	**2,961**	**4,899**	**2,396**
6604	Crow Bottom		Cattle	W, Spr	230	$ 6,900	195	10 10	
6612	Bitter Creek		Sheep	Spr	1,026	$30,780	976	30	30
	TOTAL Alt. 2				**7,697**	**$230,550**	**4,154**	**4,939**	**2,426**

* Non-use past five years

United States Department of the Interior
NATIONAL PARK SERVICE
WATER RESOURCES DIVISION
301 SOUTH HOWES ST., ROOM 335
FT COLLINS, COLORADO 80521

IN REPLY REFER TO:

June 8, 1989

L54(479)
RMR/BLCA, COLM

Memorandum

To: Superintendent, Black Canyon National Monument
Superintendent, Colorado National Monument

From: Chief, Water Rights Branch, Water Resources Division

Subject: Possible Unit Expansions—Water Rights Implications

As requested of the Chief, Water Resources Division, the following assessment of the water rights implications of the possible expansion of Colorado National Monument (COLM) and Black Canyon of the Gunnison National Monument (BLCA) is prepared for your information.

It is our understanding that integral to deliberations surrounding possible expansion of BLCA and COLM is the issue of Federal reserved water rights. Specifically at issue is Congressional language to explicitly exclude such water rights from the enabling legislation. This memorandum is prepared to provide perspective on the ramifications of such action.

RECENT TRENDS

Until recently, the creation of a National Park, Monument, Forest, or other Federal reserve has not been attended by the explicit reservation or rejection of water rights under the Federal reserved water rights doctrine. However, the creation of Great Basin National Park, and El Malpais, Haggerman Fossil Beds, and City of Rocks National Monuments has seen the inclusion in their enabling legislation of explicit language regarding Federal reserved water rights. This language (attached) has neither uniformly embraced nor rejected such rights. To understand the meaning of such language, it is appropriate to briefly describe the history and nature of the Federal reserved water right before proceeding further.

BACKGROUND

First, it is important to note that the Federal reserved water rights doctrine is a creation of the courts. It began in 1908 with a finding by the U.S. Supreme Court regarding an Indian reservation. The Court determined that, even though there was no treaty language addressing water rights and State law governed the ownership of the right to use water, water rights were engendered by the Federal Government's creation of the Fort Belknap Indian Reservation. The doctrine was gradually expanded until the early 1970's when the Court began to limit its application.

In summary, a simplistic description of the doctrine of reserved rights is—a right for the Federal Government to use unappropriated water arises, by implication, on the date of (and by the act of) the Federal Government's creation from the Public Domain of a reservation for specific purposes. The water right is for the primary purposes of that reservation and is only for the minimum amount necessary to prevent the defeat of those purposes.

THE COLM/BLCA SITUATION

On the basis of the foregoing we may view the COLM/BLCA situation as follows. Any reserved water rights created, implied, or explicitly stated in the enabling legislation, would come from water then unappropriated under State law, would have a priority date as of the date of the new reservation, and would be for the minimum amount necessary to prevent defeat of the reservation's primary purposes. As a practical matter, such a water right would not likely be very good in this particular instance. It would be in a basin whose water has been allocated under terms of an interstate compact and, within the State, is probably fully appropriated. A late 1980's or early 1990's priority date would have little real significance in providing water for the reservation. Furthermore, because the Federal reserved water right is for the minimum amount to prevent defeat of the primary purposes of the reservation, significant debate would likely surround the determination of the quantity of water actually reserved.

It is important to note that a water right, even a very junior one, has implications which could be viewed as either problematical or advantageous, depending upon perspective. In Colorado, as in most western states, changes in existing water rights (e.g., changes in location of diversion and/or use and changes in timing or type of beneficial use) must be approved by the State through either court or administrative action. Before such changes are approved, however, it must be demonstrated that junior appropriators will not be injured. Such a determination may be made more difficult by the existence of a Federal reserved water right, especially if that right were for in situ uses such as instream flow or environmental protection/enhancement. Thus, those interests which look for future changes in water development may perceive a Federal reserved water right, implicit or expressed, as a potential limitation upon future development opportunities.

On the other hand, while actual amounts of water which could be secured for present and future use may be limited, a Federal reserved water right could provide a limited degree of assurance that existing resource conditions may be protected into the future. Further, in view of the fact that water deliveries are required to downstream states and the Federal reserved water right might be non-consumptive in nature, a late date reserved right could possibly be created and met through interstate deliveries. The shortcoming of such a scheme would probably be found in the longer term average nature (10-year mean) of the delivery requirement in contrast to the annual needs of a National Park/Monument.

WILDERNESS

Because part of the land proposed for expansion is now a wilderness study area under Bureau of Land Management jurisdiction, another aspect of the COLM/BLCA situation that needs to be considered is Federal reserved water rights associated with wilderness designation. This was the focus of a Supplemental

Solicitor's Opinion dated July 26, 1988, which was affirmed in a memorandum signed by the Attorney General on July 28, 1988. Briefly, the opinion concludes that, without express language to the contrary, Federal water rights are not reserved when wilderness areas are designated. The opinion reasoned that Congress intended that the original reservation of the land, be it National Forest, National Park, or National Preserve, would carry with it water rights sufficient for primary reservation purposes. Subsequent wilderness designation was a "secondary purpose" for which no water was reserved. The original reserved water rights would be sufficient for the new "purposes."

However, in the case of most of the land administered by the BLM, designation as wilderness would likely be the original reservation. Thus, it could be argued that water should be reserved for wilderness purposes. Ignoring, for argument's sake, the Supplemental Solicitor's Opinion, the designation of a wilderness overlying a National Monument could be viewed as a new reservation, even though secondary, which could be construed to expand the purposes of the area and thereby expand the reserved water rights. In either case, these water rights would carry a priority date coincident with the date of reservation as wilderness and would have the characteristics of junior water rights discussed earlier.

Having said this, it should be noted that the Supplemental Solicitor's Opinion stands and designation of land in Colorado as wilderness is doubtful in the near future because the question of water rights continues to be debated.

The decision to include in enabling legislation language addressing reserved water rights rests with elected representatives. So, too, the decision to embrace or reject such rights. With regard to National Park Service (NPS) management of these areas if expanded, the existence of such a right could provide the NPS with opportunity to limit, through action by the State in its protection of junior water rights holders, impacts to primary reservation purposes. However, this opportunity represents uncertainty and potential conflict in the eyes of those who have expectations of future water resource development or change.

I hope this information is of value to your assessment effort. If additional assistance, clarification, or background information is required, please call me at (303) 221-8301. If a legal opinion is needed from either the Office of the Solicitor or the Department of Justice, the Water Resources Division will be happy to assist in the formulation of a request.

O. R. Wilson

Attachment

cc: RMR - Rouse, Hermance
WRD - Ponce, Kimball, Jackson, Pettee, Czarnowski

GLOSSARY OF ACRONYMS

ACEC	Area of Critical Environmental Concern
AUM	Animal Unit Month
BLM	Bureau of Land Management
COLM	Colorado National Monument
DOW	Division of Wildlife
FLPMA	Federal Land Policy and Management Act
IMP	Interim Management Plan
NCA	National Conservation Area
NM	National Monument
NP	National Park
NPS	National Park Service
NRA	National Recreation Area
ORV	Off-Road Vehicle
PSD	Prevention of Significant Deterioration
RMP	Resource Management Plan
RNA	Research Natural Area
SRP	Special Recreation Permit
TSP	Total Suspended Particulates
USGS	United States Geological Survey
VRM	Visual Resource Management
WSA	Wilderness Study Area

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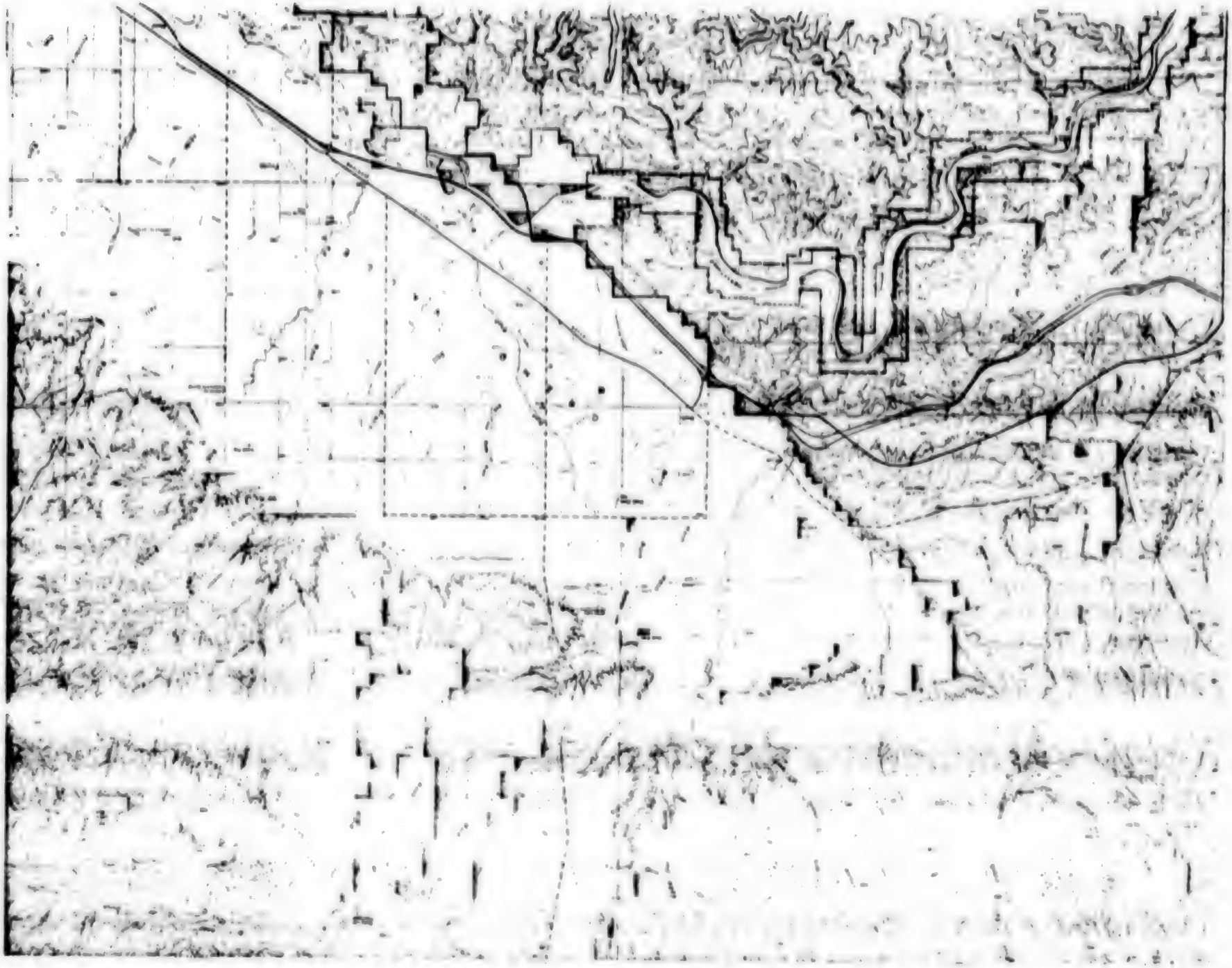


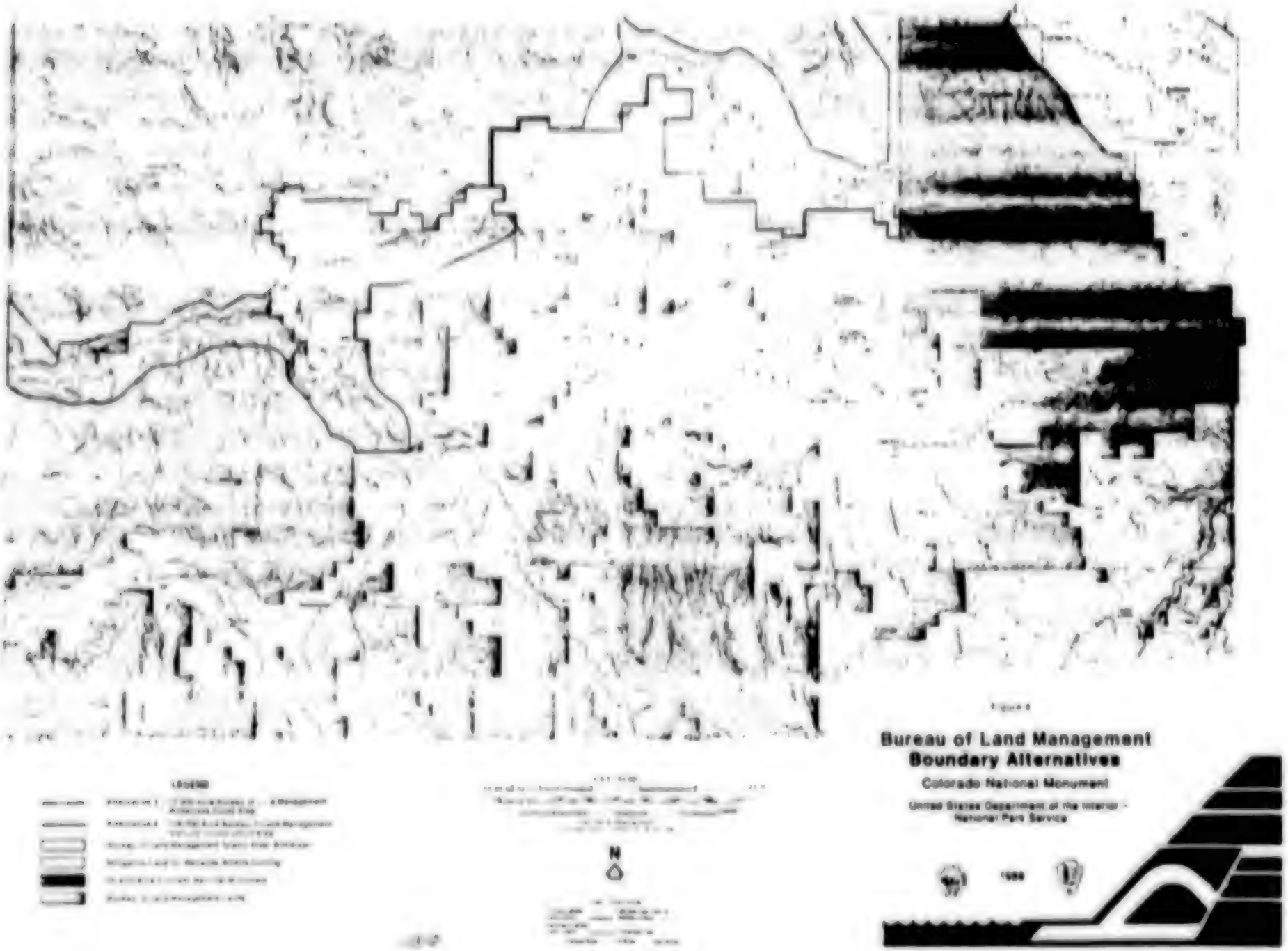
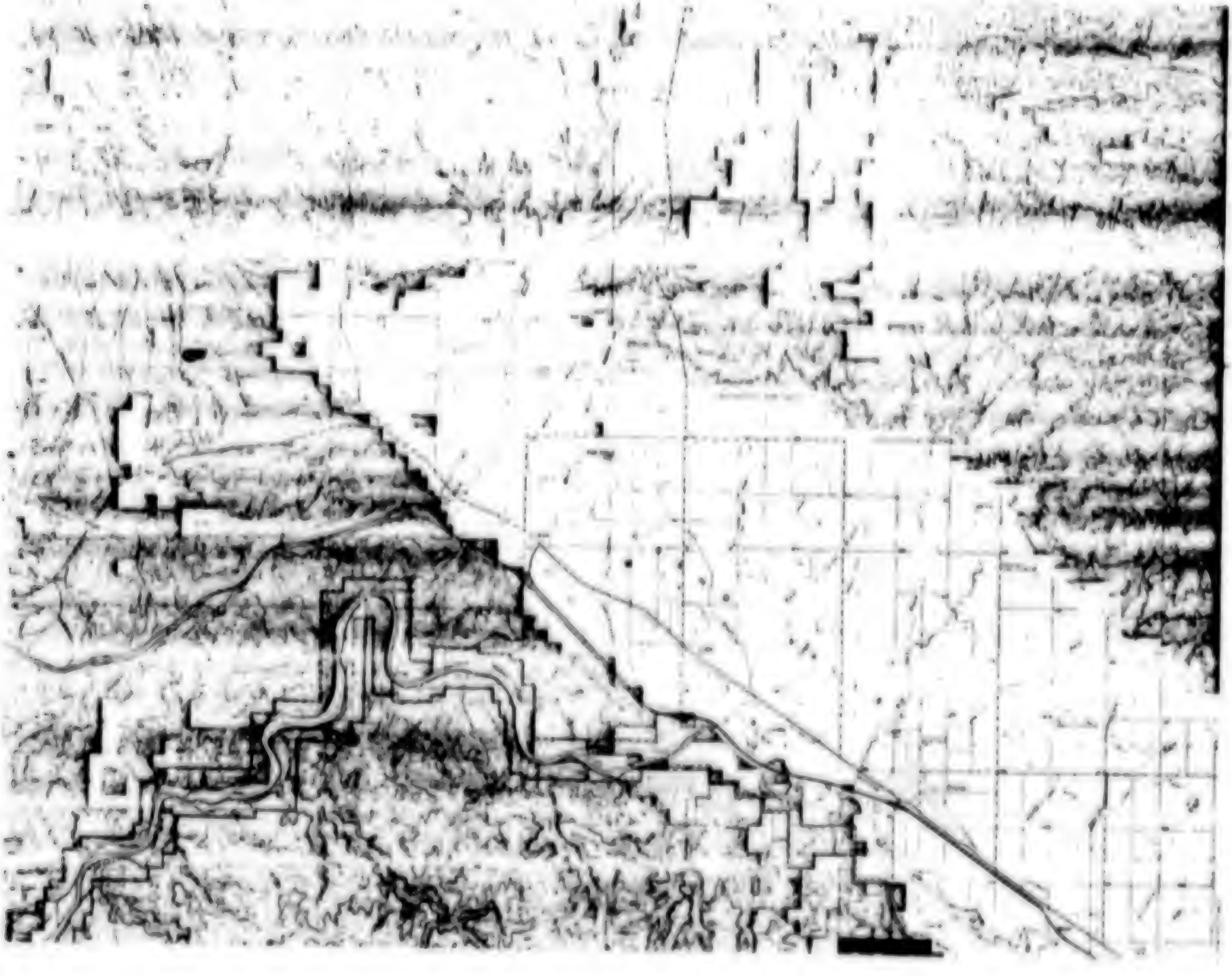


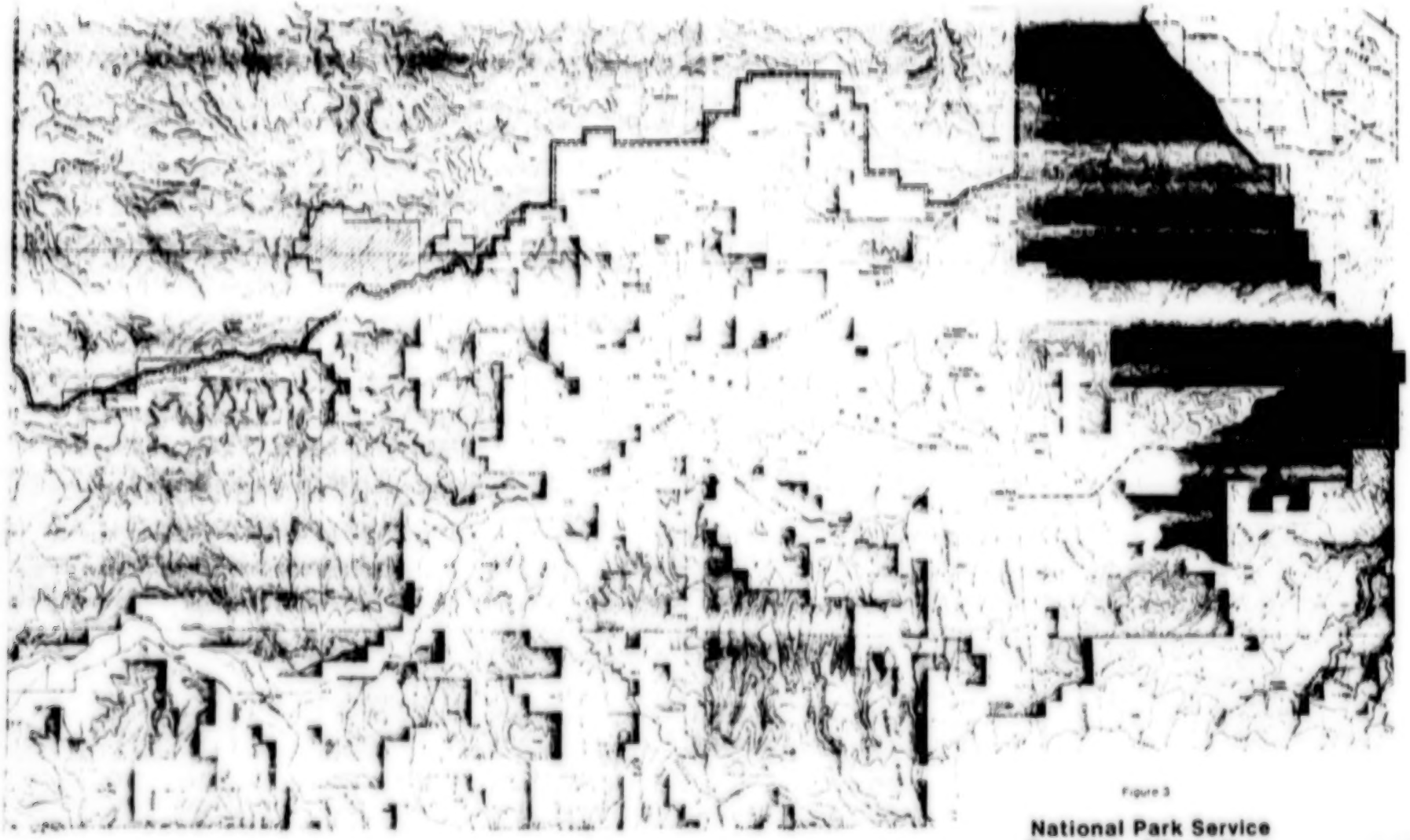
Figure 4

Bureau of Land Management Boundary Alternatives

Colorado National Monument

United States Department of the Interior - National Park Service





LEGEND

Alternative 1 - 77,030 Acre Boundary Expansion (excludes 3,700 acres of private land)

Alternative 2 - 93,600 Acre Boundary Expansion (includes 4,900 acres of private land)

Bureau of Land Management Scenic River Withdrawal

Mesaphon Land for desirable wildlife hunting

(6,470 Acre Colorado National Monument)

Bureau of Land Management Lands

Private Land within Alternative Boundaries

N

Figure 3

National Park Service Boundary Alternatives

Colorado National Monument

United States Department of the Interior - National Park Service

1988

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration. NPS D-33

END

9-10-91